1069

ACIDIC PRECIPITATION IN ONTARIO STUDY

CUMULATIVE AMBIENT AIR CONCENTRATION LISTINGS 1988

JULY 1990

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1988

Report Prepared by:
Atmospheric Research and Planning Unit
Air Resources Branch
Ontario Ministry of the Environment

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This report was prepared by Diane Green of the APIOS Atmospheric Deposition and Chemistry Program. However, the data themselves are a product of the combined efforts of many individuals. Precipitation samples were collected by a large number of site operators, whose names cannot be individually mentioned here, under the coordination of the APIOS environmental technicians Scott Kennedy (in the Southwestern Region), Steve Elliott (in Southeastern Region), Wim Smits (in Northwestern Region), Bill Trayling (Northeastern Region), and J.P. Varto (in Central Region). Sample handling was carried out by Sue Lampinen and Gail Fielding. Chemical analyses were performed at the Laboratory Services Branch under the coordination of Frank Tomassini. Invaluable clerical and computer assistance were provided by Peter Maheras, Joseph Lamb and Roberto Banchon. All enquiries regarding the reported data should be directed to Neville Reid, Coordinator, Atmospheric Deposition and Chemistry Program, at (416) 326-1691.

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PART V NORTHWESTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

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PART VI SOUTHEASTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

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PART VII SOUTHWESTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

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Palmerston	08	41
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PART I

INTRODUCTION

INTRODUCTION

The data listed herein are a summary of the results acquired from the APIOS cumulative ambient air sampling network from January 1988 to December 1988. All data presented in this report have been screened for validity. Remarks and qualifications have been appended to records, and/or results where necessary. The screening procedure involves the application of a Dixon Ratio Test to concurrent data from all the sites in the same region over a given sampling period. Field comments are referred to in order to assist in the identification of problematic samples. Samples that were determined to be obvious outliers were flagged as unreliable ("U"). The sampler utilized for cumulative ambient air sampling is the Metrex AS-2 low volume air sampler. The sampler is loaded and the filter pack is exposed for 28 days beginning at 0700 h EST and terminating at 0700 h EST at the end of the sampling period. Sampling details are described in another document[1].

Station Identification

The station identification is defined by four descriptive fields (e.g. - Dorset/Cumulative/LoVol #20). The first field refers to the sampling location. The second and third fields describe the sampling interval and the instrumentation used respectively. The last numeric field refers to the index code utilized on the location map.

Cumulative Ambient Air Concentration Listings

Each filter pack is loaded with a Whatman 40 filter, a nylon filter and a pair of Whatman 41 filters with the first two filter types being upstream and the last filter type being downstream. The Whatman 40 filter is analysed for particulates including SO_4, NO_3 and some trace metals.

The nylon filter is analysed for gaseous HNOz and the Whatman 41 filter (impregnated with OzK_2CO_3 - glycerol) is analysed for gaseous SO_2. Beginning in 1985, "Sulphur Dioxide" is corrected by the addition of nylon filter sulfate. In these reports, the sulphur loading on nylon filters is interpreted as sulphur dioxide. However, it is possible that organic sulphur compounds also contribute to this loading. Methods do not currently exist quantify this contribution in routine network operation. The reported parameter "TOTL NO_3" represents total nitrates and is calculated by the summation of $N\text{-}HNO_3$ and $N\text{-}NO_3$. No individual value of particulate nitrate and nitric acid are reported due to potential artifacts of the filter media used. Prior to 1986, if a detection limit was encountered in the calculation of "TOTL NO_3" then a value corresponding to one half the detection limit was utilized. These results are no longer halved. Remark codes (e.g. -U, A) appended to individual results are defined in a later section.

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1. Chan, W.H., Orr, D.B. and Vet, R.J. (1984). Acidic Precipitation in Ontario Study - An Overview: The Cumulative Wet/Dry Deposition Network. Ontario Ministry of the Environment Report #ARB-164-84-ARSP.

Field Comment Code Index

A - Sampler malfunction
B - Hydro failure (known/suspected)
C - Flow volume suspect
D - Contamination (known/suspected)
E - Filter placement incorrect
F - Sample not submitted
Q - Other

Office Comment Code Index

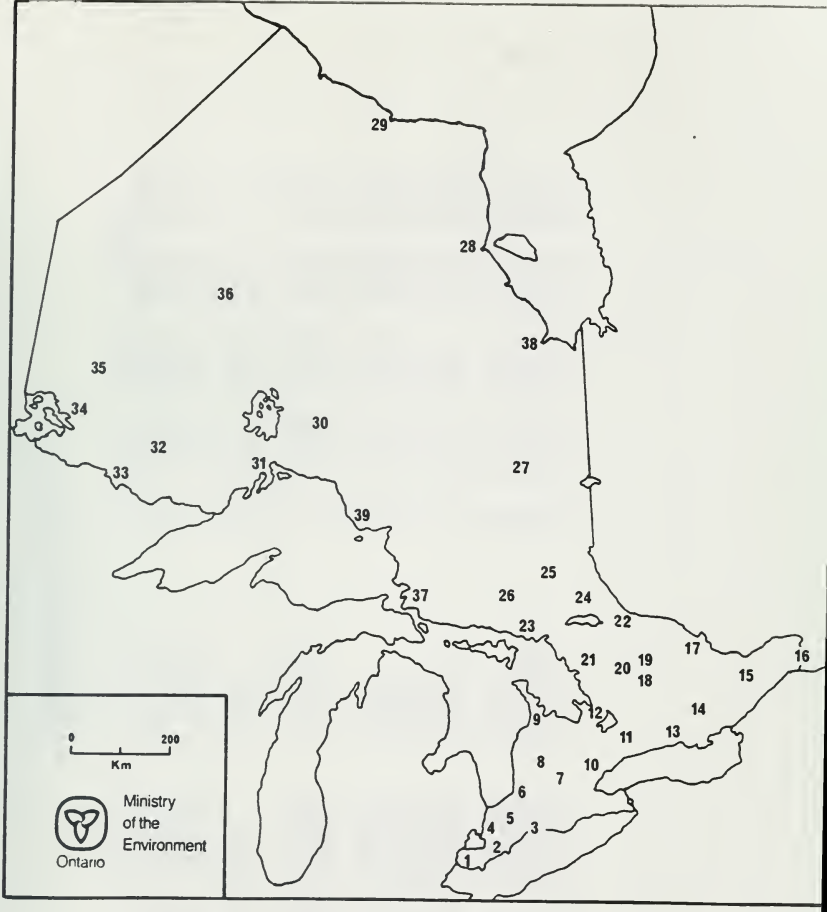
F - Data invalidated - if the daily average flow volume is outside the range of (2880 + 50%) litres per day.
Z - Abnormal sampling period.

Result Remark Code Index

< - actual result greater than value reported
> - actual result less than value reported
<T - actual result less than criterion of detection
<W - no response, minimum possible result reported
A - approximate value
U - unreliable result
D - outlier of Dixon Ratio Test

PART II

STATION DESCRIPTION AND LOCATION MAP



1. Colchester*
2. Merlin
3. Pt. Stanley*
4. Wilkesport*
5. Alvinston
6. Huron Park
7. Waterloo
8. Palmerston*
9. Shallow Lake*
10. Milton (removed March '84)
11. Uxbridge*
12. Coldwater
13. Campbellford*
14. Cloyne* (repl. Kalladar, June '83)
15. Smith's Falls*
16. Dalhousie Mills*
17. Golden Lake*
18. Wilberforce
19. Whitney
20. Dorset*
21. McKellar*
22. Mattawa*
23. Killarney*
24. Bear Island
25. Gowganda*
26. Azure Lake (repl. Ramsey, June '83)
27. Moonbeam*
28. Attawapiskat (rem. Feb '84)
29. Winisk (rem. Dec '86)
30. Geraldton (replaced Nakina, Aug '83)
31. Dorion*
32. Quetico Centre*
33. Lac la Croix
34. Experimental Lakes Area
35. Ear Falls*
36. Pickle Lake*
37. Turkey Lake*
38. Moosonee* (installed October '85)
39. Otter Island* (summer only)
40. Sutton, Quebec (Intercomparison Site)

* indicates both a wet and dry deposition network site

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS-ACIDIC PRECIPITATION IN ONTARIO STUDY
CUMULATIVE AMBIENT AIR SITES

STATION ID	MOE REGION	STATION NAME	ELEV (M)	LATITUDE (NORTH)	LONGITUDE (WEST)	UTM GRID CO-ORDINATES (NORTHING)	(EASTING)
000001-22-21-1041	SOUTHWESTERN	COLCHESTER	183	41°59'15"	82°55'41"	4649973	340284
000001-22-21-1061	SOUTHWESTERN	PORT STANLEY	213	42°40'22"	81°09'55"	4724277	486457
000001-22-21-1071	SOUTHWESTERN	WILKESPORT	183	42°42'11"	82°21'13"	4728515	389135
000001-22-21-1091	SOUTHWESTERN	SHALLOW LAKE	229	44°34'54"	81°06'58"	4936270	490782
000001-22-21-1101	SOUTHWESTERN	PALMERSTON	389	43°48'19"	80°54'12"	4850035	507776
000001-22-21-3011	CENTRAL	DORSET	320	45°13'26"	78°55'52"	5009656	662429
000001-22-21-3061	CENTRAL	UXBRIDGE	244	44°12'46"	79°12'38"	4896847	642958
000001-22-21-3081	CENTRAL	CAMPBELLFORD	175	44°17'28"	77°47'33"	4907783	277202
000001-22-21-4061	SOUTHEASTERN	SMITH'S FALLS	122	44°56'41"	75°57'48"	4977044	423999
000001-22-21-4071	SOUTHEASTERN	DALHOUSIE MILLS	69	45°19'00"	74°28'13"	5018048	541521
000001-22-21-4081	SOUTHEASTERN	GOLDEN LAKE	160	45°36'48"	77°12'03"	5053226	328397
000001-22-21-4091	SOUTHEASTERN	CLOYNE	259	44°49'10"	77°11'07"	4964999	327221
000001-22-21-5011	NORTHEASTERN	MCKELLAR	244	45°31'15"	79°55'19"	5041158	584196
000001-22-21-5021	NORTHEASTERN	KILLARNEY	183	45°58'20"	81°29'18"	5090859	462167
000001-22-21-5031	NORTHEASTERN	MATTAWA	198	46°16'39"	78°49'19"	5126968	667810
000001-22-21-5061	NORTHEASTERN	GOWGANDA	343	47°39'04"	80°46'32"	5277329	516647
000001-22-21-5071	NORTHEASTERN	MOONBEAM	244	49°19'40"	82°01'10"	5464175	425924
000001-22-21-5141	NORTHEASTERN	TURKEY LAKES	440	47°03'15"	84°24'20"	5214246	697468
000001-22-21-5161	NORTHEASTERN	MOOSONEE	8	51°12'35"	80°42'20"	5672970	520568
000001-22-21-5201	NORTHEASTERN	MCFARLANE LAKE	246	46°25'57"	81°57'03"	5142324	426948
000001-22-21-6011	NORTHWESTERN	DORION	244	48°50'33"	88°36'45"	5410982	381684
000001-22-21-6031	NORTHWESTERN	EAR FALLS	350	50°38'31"	93°13'13"	5609814	484424
000001-22-21-6041	NORTHWESTERN	PICKLE LAKE	360	51°02'41"	90°12'04"	5658308	696198
000001-22-21-6071	NORTHWESTERN	QUETICO CENTRE	420	48°24'44"	91°12'08"	5363461	633036
000001-22-21-6111	NORTHWESTERN	OTTER ISLAND	204	48°06'50"	86°04'25"	5329155	568954
000001-22-21-6121	NORTHWESTERN	GERALDTON	350	49°48'18"	86°45'52"	5516758	516950

PART III

CENTRAL REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=CE STATION=CAMPBELLFORD LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME (L)	PASSIVE NUMBER 1
00067020	AP02566		02	01	JAN 26, 1988	DEC 31, 1987	1900	2050	1	.	
00067012	AP02566	AS	02	01	FEB 23, 1988	JAN 26, 1988	1720	1900	1	52921	
00067018	AP02566	AS	02	01	MAR 22, 1988	FEB 23, 1988	1615	1720	1	53054	
00066006	AP02635	AS	02	01	APR 19, 1988	MAR 22, 1988	1815	1615	1	60501	
00066017	AP02635	AS	02	01	MAY 17, 1988	APR 19, 1988	1830	1815	1	71920	
00066081	AP02783	AS	02	01	JUN 15, 1988	MAY 17, 1988	1845	1830	1	41890	
00066084	AP02783	AS	02	01	JUL 12, 1988	JUN 27, 1988	2215	1515	1	33034	
00106122	AP03182		02	01	SEP 19, 1988	JUL 12, 1988	1640	2215	1	.	
00024692	AP02915	AS	02	01	OCT 4, 1988	SEP 19, 1988	1815	1640	1	43596	
00024701	AP02915	AS	02	01	NOV 1, 1988	OCT 4, 1988	1840	1830	1	82768	
00024719	AP02919	AS	02	01	NOV 29, 1988	NOV 1, 1988	1100	1855	1	81900	
00094679	AP02994	AS	02	01	DEC 28, 1988	NOV 29, 1988	1236	1105	1	91123	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3		SULFATE UG/M3		NITRIC UG/M3	NITRATE UG/M3		CALCIUM UG/M3
00067020		FQ	Z	****		****		****	****		****
00067012				10.37		2.95		0.165	0.652		0.246
00067018		D		7.12		2.70		0.094	0.556		0.452
00066006		D		4.13		3.44		0.103	0.669		0.364
00066017				3.16		2.75		0.058	0.445		0.528
00066081		B		8.96	UG	6.97		0.191	0.776		0.939
00066084		BQ	Z	6.81		7.60		0.159	0.530	UG	2.975
00106122		F	Z	****		****		****	****		****
00024692			Z	3.86		3.05		0.092	0.310		0.803
00024701				2.36		1.12	LG	0.041	0.211		0.266
00024719				8.04		3.16		0.068	0.623		0.452
00094679		C		8.98		2.34		0.100	0.658		0.483

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=CE STATION=CAMPBELLFORD LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00067020	****	****	****	****	****	****	****
00067012	0.690	0.057	0.359	<T 0.076	<T 0.033	<W 0.038	<T 0.008
00067018	0.594	0.057	0.339	<T 0.044	0.068	<W 0.038	<T 0.007
00066006	0.397	0.074	0.202	0.119	0.068	0.281	<T 0.004
00066017	0.334	0.039	0.110	0.132	0.095	0.236	<T 0.003
00066081	0.621	0.122	0.191	0.199	0.065	<T 0.213	<T 0.008
00066084	0.545	0.086	0.186	0.239	0.107	<W 0.061	<W 0.003
00106122	****	****	****	****	****	****	****
00024692	0.229	0.063	0.333	<T 0.092	0.048	<T 0.050	0.007
00024701	0.157	0.015	0.076	<T 0.052	0.042	<T 0.030	0.008
00024719	0.244	0.046	0.101	<W 0.006	0.053	0.044	0.016
00094679	0.444	0.066	0.206	0.075	0.053	0.059	0.011

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00067020	****	****	****	****	****	****	****
00067012	<T 0.0057	0.004	0.00227	<T 0.0017	0.0246	0.00811	1.1300
00067018	<T 0.0047	0.004	0.00207	<T 0.0011	0.0368	0.01072	0.9764
00066006	0.0091	0.003	0.00264	<T 0.0010	0.0198	0.00942	0.7934
00066017	<T 0.0070	<T 0.001	<T 0.00097	<W 0.0007	0.0181	0.00039	0.8370
00066081	0.0131	0.005	0.00788	<T 0.0026	0.0298	0.01416	1.6663
00066084	<T 0.0151	<T 0.002	0.00575	<T 0.0024	0.0242	0.01199	1.4016
00106122	****	****	****	****	****	****	****
00024692	0.0053	<T 0.001	<T 0.00161	0.0014	0.0135	0.00849	0.9405
00024701	0.0029	<T 0.000	<T 0.00072	<T 0.0002	LG 0.0064	0.00677	0.5437
00024719	0.0050	0.002	<T 0.00147	0.0012	0.0147	<T 0.00061	0.4518
00094679	0.0049	0.002	<T 0.00110	0.0010	0.0154	0.00373	0.5811

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=CE STATION=DORSET LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00076050	AP02482	AS	02	01	JAN 26, 1988	DEC 29, 1987	0906	1000	1	86109	
00047992	AP02484	AS	02	01	FEB 23, 1988	JAN 26, 1988	0925	0908	1	85298	
00077042	AP02521	AS	02	01	MAR 22, 1988	FEB 23, 1988	0850	0929	1	87732	
00076067	AP02589	AS	02	01	APR 19, 1988	MAR 22, 1988	1030	0900	1	85539	
00076074	AP02612	AS	02	01	MAY 17, 1988	APR 19, 1988	0901	1040	1	84799	
00076080	AP02628	AS	02	01	JUN 14, 1988	MAY 17, 1988	1040	0902	1	85269	
00043700	AP02798	AS	02	01	JUL 12, 1988	JUN 14, 1988	0827	1100	1	83851	
00043706	AP02798	AS	02	01	AUG 9, 1988	JUL 12, 1988	0930	0830	1	54425	
00043712	AP02798	AS	02	01	SEP 6, 1988	AUG 9, 1988	1140	1700	1	69918	
00043718	AP02865	AS	02	01	OCT 4, 1988	SEP 6, 1988	1000	1143	1	79526	
00043724	AP02896	AS	02	01	NOV 1, 1988	OCT 4, 1988	0815	1000	1	84969	
00043730	AP02952	AS	02	01	NOV 29, 1988	NOV 1, 1988	0845	0815	1	84464	
00043736	AP02986	AS	02	01	DEC 28, 1988	NOV 29, 1988	0944	0845	1	89320	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3		SULFATE UG/M3		NITRIC UG/M3		NITRATE UG/M3		CALCIUM UG/M3	
00076050					8.06		2.51		0.180		0.348		0.193
00047992				RRV	7.82		2.23	RRV	0.203		0.264		0.047
00077042					4.90		2.07		0.123		0.256		0.101
00076067					3.49		3.09		0.144		0.228	<T	0.070
00076074				D	2.54		2.31		0.071		0.218	<W	0.024
00076080					2.42		2.76		0.065		0.164	<W	0.023
00043700					2.41		5.63		0.265	<T	0.018		0.499
00043706		AC			1.32		4.15		0.217	<T	0.028		0.314
00043712		CA		<W	0.21	LG	0.24	LG	0.034	<T	0.021		0.076
00043718		C			2.46		2.97		0.168	<T	0.013		0.167
00043724					3.68		1.85		0.169		0.029		0.117
00043730		Q			4.46		2.64		0.317	<T	0.030		0.072
00043736		Q			5.34		2.15		0.242		0.162		0.100

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=CE STATION=DORSET LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00076050	0.383	0.048	0.229	0.053	0.046	0.015	0.003
00047992	0.258	0.040	0.199	0.051	0.045	0.006	0.004
00077042	0.211	0.025	0.182	0.046	0.039	0.045	0.002
00076067	0.251	0.037	0.355	<T 0.036	<W 0.006	<W 0.023	<T 0.002
00076074	0.183	0.024	0.088	<W 0.012	0.040	<W 0.024	<T 0.003
00076080	0.188	0.033	0.096	0.072	0.156	<W 0.023	<T 0.002
00043700	<W 0.012	0.080	0.039	0.310	0.358	0.157	|BL ****
00043706	<W 0.018	0.064	0.028	0.184	0.239	0.089	|BL ****
00043712	<W 0.014	<W 0.004	<W 0.004	<W 0.007	LG 0.004	LG 0.004	|BL ****
00043718	<W 0.013	0.047	0.031	<T 0.029	0.045	0.025	|BL ****
00043724	<W 0.012	<W 0.006	0.177	0.060	0.044	<T 0.027	0.006
00043730	<W 0.012	0.041	0.047	<T 0.037	0.032	<T 0.021	0.011
00043736	<T 0.022	0.036	0.132	<W 0.006	0.017	<T 0.028	0.009

SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMIUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00076050	0.0029	0.002	0.00058	0.0008	0.0106	0.00295	0.7084
00047992	0.0029	0.003	0.00481	0.0008	0.0328	0.01039	RRV 0.8324
00077042	0.0023	0.003	0.00228	0.0006	0.0131	0.01040	0.7443
00076067	<T 0.0029	0.002	0.00175	<T 0.0011	0.0120	0.00360	0.8183
00076074	<T 0.0053	0.002	0.00259	<W 0.0006	0.0142	0.00778	0.9410
00076080	0.0076	0.002	0.00281	<T 0.0009	0.0100	0.00800	0.7975
00043700	0.0101	0.003	<T 0.00060	0.0012	0.0131	<T 0.00012	0.8587
00043706	0.0066	0.002	<W 0.00037	<T 0.0007	0.0088	<T 0.00018	0.5696
00043712	<T 0.0001	<T 0.000	<T 0.00043	<W 0.0001	<T 0.0010	<W 0.00007	0.3004
00043718	0.0021	0.002	<W 0.00025	<T 0.0003	0.0069	<T 0.00013	0.5156
00043724	0.0032	<T 0.001	<T 0.00129	<T 0.0005	0.0093	<T 0.00035	0.3766
00043730	0.0027	0.002	<T 0.00083	0.0007	0.0112	<T 0.00024	0.5801
00043736	0.0022	0.002	<T 0.00078	<T 0.0006	0.0099	<T 0.00045	0.6270

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=CE STATION=UXBRIDGE LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00106284	AP03369	AS	02	01	JUN 14, 1988	MAY 17, 1988	0800	0800	1	.	
00084182	AP02443	AS	02	01	JAN 26, 1988	DEC 30, 1987	0840	1330	1	81340	
00084079	AP02537	AS	02	01	FEB 23, 1988	JAN 26, 1988	0730	0840	1	82010	
00084252	AP02537	AS	02	01	MAR 22, 1988	FEB 23, 1988	0645	0730	1	81880	
00084314	AP02550	AS	02	01	APR 20, 1988	MAR 22, 1988	1400	0645	1	77806	
00084407	AP02609	AS	02	01	MAY 17, 1988	APR 20, 1988	0800	1400	1	85552	
00084499	AP02696	AS	02	01	JUL 12, 1988	JUN 14, 1988	0715	0600	1	82432	
00084576	AP02746	AS	02	01	AUG 9, 1988	JUL 12, 1988	0920	0750	1	79058	
00084765	AP02760	AS	02	01	SEP 6, 1988	AUG 9, 1988	0625	0920	1	68309	
00084825	AP02891	AS	02	01	OCT 4, 1988	SEP 6, 1988	0645	0630	1	3297	
00084903	AP02870	AS	02	01	NOV 1, 1988	OCT 4, 1988	1710	0645	1	74540	
00041017	AP02915	AS	02	01	NOV 29, 1988	NOV 1, 1988	1035	1710	1	76159	
00042130	AP02950	AS	02	01	DEC 29, 1988	NOV 29, 1988	0705	1035	1	80800	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3		SULFATE UG/M3		NITRIC UG/M3		NITRATE UG/M3		CALCIUM UG/M3	
00106284		F		****		****		****		****		****	
00084182		A		14.04		3.32		0.083		0.701		0.867	
00084079				10.57		3.19	LG	0.024		0.658		0.168	
00084252				6.73		2.25		0.073		0.458		0.230	
00084314		Q		LG 1.37	LG	1.13	<T	0.006	LG	0.270		0.244	
00084407		CA		2.44		2.49		0.150		0.362		0.295	
00084499				2.75		4.09	LG	0.030		0.394	<T	0.115	
00084576				LG 1.43		1.95		0.070		0.108	<W	0.025	
00084765				4.33		4.83		0.132		0.271		0.527	
00084825		A	F	UG 46.20	UG	41.25	UG	1.699	UG	4.246	UG	7.886	
00084903				3.88		1.48		0.070		0.262		0.310	
00041017		A		4.97		2.14		0.081		0.440		0.210	
00042130			Z	2.55	LG	0.75		0.045	LG	0.198		0.136	

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=CE STATION=UXBRIDGE LOVOL SITE NO.1

SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00106284	****	****	****	****	****	****	****
00084182	0.645	0.087	0.388	UG 0.254	UG 0.252	0.148	D 0.017
00084079	0.628	0.054	0.328	0.064	0.060	0.019	0.005
00084252	0.531	0.027	0.305	0.060	0.071	0.029	0.003
00084314	B 0.174	0.039	0.116	<T 0.055	<T 0.014	<W 0.026	0.007
00084407	0.263	LG 0.030	0.083	<T 0.017	0.098	<W 0.023	<T 0.003
00084499	0.279	0.053	0.112	0.115	0.069	<W 0.024	0.008
00084576	0.443	LG 0.021	0.073	0.068	0.040	<W 0.025	<W 0.001
00084765	0.234	0.093	0.270	0.143	<T 0.036	0.167	0.012
00084825	UG 4.853	<T 0.152	UG 2.275	UG 2.062	UG 1.092	<T 0.789	UG 0.249
00084903	0.215	0.030	0.094	<T 0.051	0.048	0.043	|BL ****
00041017	0.263	0.016	0.368	0.095	0.060	<T 0.038	0.013
00042130	0.260	0.022	0.121	<T 0.035	0.024	<T 0.016	0.005

SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMIUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00106284	****	****	****	****	****	****	****
00084182	UG 0.0154	0.003	0.00246	0.0011	0.0357	0.00025	0.6147
00084079	0.0049	B 0.011	0.00415	0.0010	0.0317	0.01464	0.3268
00084252	0.0037	0.005	0.00208	0.0006	0.0177	0.01463	0.6900
00084314	<T 0.0032	<T 0.001	0.00141	<T 0.0013	0.0180	0.00907	LG 0.1902
00084407	0.0099	0.002	0.00234	<T 0.0007	0.0234	0.00923	0.8568
00084499	0.0091	0.003	0.00230	<T 0.0008	0.0303	0.00582	0.7946
00084576	<T 0.0025	0.002	0.00544	<T 0.0009	0.0101	0.00569	0.8348
00084765	<T 0.0073	0.005	0.00439	<T 0.0012	0.0220	0.00117	1.0877
00084825	UG 0.0849	UG 0.042	<T 0.01213	<T 0.0061	UG 0.2396	<T 0.00607	UG 12.4355
00084903	0.0042	<T 0.001	<W 0.00027	<T 0.0005	0.0098	<T 0.00027	0.6439
00041017	0.0047	0.002	<T 0.00118	<T 0.0007	0.0158	<T 0.00039	0.8797
00042130	LG 0.0021	<T 0.001	<W 0.00025	<T 0.0001	LG 0.0057	<T 0.00025	0.5446

PART IV

NORTHEASTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NE STATION=GOWGANDA LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00081131	AP02482	AS	02	01	JAN 26, 1988	DEC 29, 1987	1020	1010	1	92311	
00081163	AP02498	AS	02	01	FEB 23, 1988	JAN 26, 1988	1035	1020	1	89877	
00081194	AP02544	AS	02	01	MAR 22, 1988	FEB 23, 1988	1025	1035	1	92122	
00081223	AP02566	AS	02	01	APR 19, 1988	MAR 22, 1988	0908	1025	1	88132	
00081254	AP02612	AS	02	01	MAY 17, 1988	APR 19, 1988	0710	0908	1	85698	
00081291	AP02635	AS	02	01	JUN 14, 1988	MAY 17, 1988	0710	0710	1	86037	
00081333	AP02689	AS	02	01	JUL 12, 1988	JUN 14, 1988	0807	0710	1	90311	
00081377	AP02741	AS	02	01	AUG 9, 1988	JUL 12, 1988	0703	0807	1	77821	
00081435	AP02915	AS	02	01	SEP 6, 1988	AUG 9, 1988	0850	0703	1	91330	
00081471	AP02864	AS	02	01	OCT 4, 1988	SEP 6, 1988	0841	0850	1	91736	
00081503	AP02915	AS	02	01	NOV 1, 1988	OCT 4, 1988	0829	0841	1	88070	
00081527	AP02919	AS	02	01	NOV 29, 1988	NOV 1, 1988	0905	0829	1	81622	
00081561	AP02947	AS	02	01	DEC 27, 1988	NOV 29, 1988	0845	0905	1	81796	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3
00081131				6.78	1.95	0.095	0.276	0.021
00081163				10.43	2.28	0.137	0.161	0.022
00081194				4.50	1.68	0.049	0.163	0.022
00081223				6.30	2.56	0.091	0.068	<W 0.023
00081254				2.11	1.89	0.035	0.117	<W 0.023
00081291				2.47	1.43	0.029	0.081	0.221
00081333				1.88	2.92	0.072	0.122	<W 0.022
00081377				1.68	2.39	0.071	0.096	<W 0.026
00081435				2.53	2.78	0.066	0.060	0.131
00081471				2.50	2.56	0.063	0.087	0.211
00081503				3.90	1.64	0.075	0.125	0.136
00081527				5.79	2.32	0.137	0.110	<T 0.033
00081561				5.05	1.70	0.068	0.183	0.083

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NE STATION=GOWGANDA LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00081131	0.309	0.031	0.200	0.028	0.011	UG 0.380	0.003
00081163	0.217	0.036	0.159	0.036	0.029	0.018	0.003
00081194	0.347	0.021	0.251	0.045	0.055	0.030	0.002
00081223	0.199	0.028	0.130	<T 0.030	0.053	<W 0.023	<T 0.003
00081254	0.123	0.022	0.082	<W 0.012	0.081	<W 0.023	<T 0.002
00081291	0.169	0.043	0.069	0.256	0.221	0.360	<W 0.001
00081333	0.188	0.050	0.075	0.177	0.199	0.255	<W 0.001
00081377	0.148	0.052	0.071	0.109	0.231	<W 0.026	0.008
00081435	0.099	0.008	0.060	0.076	0.076	0.046	0.004
00081471	0.098	0.049	0.180	0.087	0.120	0.062	|BL ****
00081503	0.102	<T 0.009	0.253	0.059	0.064	0.044	0.009
00081527	0.086	0.021	0.119	<W 0.006	0.021	<T 0.020	0.010
00081561	0.379	0.037	0.321	<T 0.037	0.026	0.038	0.009

SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMIUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00081131	0.0022	0.002	0.00108	0.0003	0.0084	0.00190	0.5308
00081163	0.0033	0.007	0.00512	0.0006	0.0295	0.00823	0.6042
00081194	0.0022	0.007	0.00369	0.0005	0.0125	0.01148	0.4722
00081223	<T 0.0023	0.004	0.00125	<W 0.0006	0.0142	0.00414	1.0586
00081254	<T 0.0035	0.005	0.00385	<W 0.0006	0.0099	0.00363	0.5601
00081291	0.0070	0.004	<T 0.00105	<T 0.0007	<T 0.0041	0.00186	0.6253
00081333	0.0066	0.007	0.00144	<W 0.0006	0.0105	0.00022	0.6400
00081377	<T 0.0045	0.006	0.00398	<W 0.0006	0.0103	0.00180	0.8841
00081435	0.0035	0.004	<T 0.00099	<T 0.0003	0.0070	<T 0.00022	0.4599
00081471	0.0045	0.004	<T 0.00065	<T 0.0004	0.0068	<T 0.00022	0.4687
00081503	0.0035	0.002	<T 0.00102	<T 0.0005	0.0093	<T 0.00045	0.4996
00081527	0.0021	0.003	<T 0.00135	<T 0.0004	0.0110	0.00074	1.0046
00081561	0.0021	0.003	<T 0.00061	<T 0.0004	0.0092	<T 0.00049	0.5991

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NE STATION=KILLARNEY LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00081137	AP02482	AS	02	01	JAN 26, 1988	DEC 29, 1987	1055	1107	1	76620	
00081170	AP02498	AS	02	01	FEB 23, 1988	JAN 26, 1988	1100	1055	1	75350	
00081201	AP02544	AS	02	01	MAR 22, 1988	FEB 23, 1988	1115	1100	1	19720	
00081230	AP02566	AS	02	01	APR 19, 1988	MAR 22, 1988	1525	1115	1	78250	
00081261	AP02612	AS	02	01	MAY 17, 1988	APR 19, 1988	1012	1525	1	78570	
00081298	AP02635	AS	02	01	JUN 14, 1988	MAY 17, 1988	0945	1012	1	79340	
00081340	AP02689	AS	02	01	JUL 12, 1988	JUN 14, 1988	0905	0945	1	75270	
00081384	AP02741	AS	02	01	AUG 9, 1988	JUL 12, 1988	0830	0905	1	77770	
00081442	AP02915	AS	02	01	SEP 6, 1988	AUG 9, 1988	0840	0830	1	78530	
00081478	AP02864	AS	02	01	OCT 4, 1988	SEP 6, 1988	1230	0840	1	79900	
00081510	AP02915	AS	02	01	NOV 1, 1988	OCT 4, 1988	1300	1230	1	81080	
00081535	AP02919	AS	02	01	NOV 29, 1988	NOV 1, 1988	1515	1300	1	77100	
00081568	AP02947	AS	02	01	DEC 28, 1988	NOV 29, 1988	0930	1515	1	85280	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3		SULFATE UG/M3		NITRIC UG/M3		NITRATE UG/M3		CALCIUM UG/M3	
00081137				8.11		1.58		0.163		0.372		0.174	
00081170				7.75		1.34		0.166		0.252		0.027	
00081201		A	F	U 4.87	U	3.02	U	0.076	U	0.431	U	0.101	
00081230		B		D 13.05	UG	3.54		0.157		0.243	<T	0.051	
00081261				B 9.31		2.62		0.067		0.229	<T	0.112	
00081298				7.31		2.76		0.044		0.195		0.164	
00081340				2.80		3.68		0.073		0.219	<W	0.027	
00081384				1.77		4.81		0.106		0.116	D	0.399	
00081442				4.31		3.62		0.097		0.127		0.166	
00081478				7.46		3.48		0.120		0.188		0.319	
00081510				7.94		1.89		0.121		0.204		0.123	
00081535				3.43		1.57		0.117		0.220	<T	0.043	
00081568		B		9.13		1.95		0.120		0.287		0.164	

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NE STATION=KILLARNEY LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00081137	0.398	0.042	0.202	0.052	0.030	0.028	0.002
00081170	0.358	0.021	0.113	0.053	0.040	0.019	0.003
00081201	U 0.583	U 0.028	U 0.317	U 0.061	U 0.013	U 0.066	U 0.003
00081230	0.249	0.032	0.134	0.109	0.101	<W 0.026	0.007
00081261	0.204	0.031	0.100	0.180	0.218	<W 0.025	<T 0.005
00081298	0.221	0.062	0.090	0.214	0.189	0.290	D 0.007
00081340	0.219	0.053	0.083	0.159	0.159	0.292	<W 0.001
00081384	0.206	0.050	0.091	0.141	0.180	<T 0.094	0.012
00081442	0.140	<T 0.008	0.083	<T 0.056	0.060	0.045	0.009
00081478	0.163	0.047	0.197	0.095	0.114	0.066	|BL ****
00081510	0.148	<T 0.015	0.210	<T 0.030	0.035	<T 0.033	0.010
00081535	0.104	0.026	0.081	<W 0.006	0.018	<T 0.018	0.006
00081568	0.258	0.053	0.182	0.069	0.059	0.056	0.011

SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMIUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00081137	0.0020	0.002	0.00026	0.0007	0.0082	0.00255	0.6330
00081170	0.0027	0.003	0.00717	0.0009	0.0139	0.01952	D 1.2780
00081201	U 0.0051	U 0.007	U 0.01673	U 0.0010	U 0.0649	U 0.03514	U 1.5619
00081230	<T 0.0045	0.007	D 0.00345	<W 0.0006	0.0153	0.00722	0.9431
00081261	<T 0.0064	0.009	D 0.00789	<T 0.0011	0.0159	0.01226	0.8082
00081298	0.0082	B 0.011	D 0.00479	<T 0.0008	0.0082	0.00063	0.7978
00081340	<T 0.0066	0.005	0.00213	<W 0.0007	0.0080	0.00027	0.8104
00081384	<T 0.0045	0.004	0.00437	<W 0.0006	0.0116	0.00193	0.8422
00081442	0.0038	UG 0.007	<T 0.00178	<T 0.0005	0.0099	<T 0.00025	0.5858
00081478	0.0053	0.005	<T 0.00225	<T 0.0005	0.0109	<T 0.00038	UG 0.8636
00081510	0.0030	0.003	<T 0.00185	<T 0.0006	0.0097	<T 0.00062	0.6043
00081535	0.0019	0.002	<T 0.00143	<T 0.0004	0.0069	<T 0.00026	0.5707
00081568	0.0035	0.006	UG 0.00340	<T 0.0005	0.0116	<T 0.00059	0.4925

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NE STATION=MATTAWA LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00081135	AP02482	AS	02	01	JAN 26, 1988	DEC 30, 1987	1435	1530	1	78240	
00081167	AP02498	AS	02	01	FEB 23, 1988	JAN 26, 1988	1330	1435	1	76780	
00081198	AP02544	AS	02	01	MAR 22, 1988	FEB 23, 1988	1420	1330	1	79200	
00081227	AP02566	AS	02	01	APR 19, 1988	MAR 22, 1988	1440	1420	1	73690	
00081258	AP02612	AS	02	01	MAY 17, 1988	APR 19, 1988	1430	1440	1	78620	
00081295	AP02635	AS	02	01	JUN 14, 1988	MAY 17, 1988	1420	1430	1	68900	
00081337	AP02689	AS	02	01	JUL 12, 1988	JUN 14, 1988	1510	1420	1	67830	
00081381	AP02741	AS	02	01	AUG 15, 1988	JUL 12, 1988	1430	1510	1	79270	
00081439	AP02915	AS	02	01	SEP 6, 1988	AUG 15, 1988	1435	1430	1	52390	
00081475	AP02864	AS	02	01	OCT 4, 1988	SEP 6, 1988	1035	1435	1	68880	
00081507	AP02915	AS	02	01	NOV 1, 1988	OCT 4, 1988	1405	1035	1	32560	
00081531	AP02919	AS	02	01	NOV 29, 1988	NOV 1, 1988	1140	1405	1	61113	
00081565	AP02947	AS	02	01	DEC 29, 1988	NOV 29, 1988	1345	1140	1	99289	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3		SULFATE UG/M3		NITRIC UG/M3		NITRATE UG/M3		CALCIUM UG/M3	
00081135		B		9.26		2.42		0.118		0.345			0.143
00081167				9.57		2.15		0.088		0.215			0.026
00081198				6.66		1.68		0.051		0.202			0.074
00081227				3.37		2.40		0.081		0.163		<T	0.054
00081258				1.82	B	0.19	LG	0.013		0.045		<W	0.025
00081295				4.70		2.16		0.044		0.109		<T	0.074
00081337				2.95		3.89		0.085		0.140		<T	0.097
00081381			Z	1.85		4.73		0.066		0.082		<W	0.025
00081439			Z	2.08		2.77		0.034		0.067			0.363
00081475				3.44		3.18		0.061		0.073			0.336
00081507		A	F	3.47		2.76		0.074		0.246			0.301
00081531		A		4.42		2.16		0.049		0.139			0.115
00081565			Z	8.41		1.87		0.052		0.247		UG	0.252

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=NE STATION=MATTAWA LOVOL SITE NO.1

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00081135	0.409	0.064	0.256	0.061	0.042	0.024	0.007
00081167	0.313	D 0.067	0.246	0.060	0.039	0.014	LG 0.001
00081198	0.303	0.029	0.241	D 0.152	D 0.126	0.042	0.005
00081227	0.210	D 0.041	0.149	0.142	0.138	<W 0.027	<T 0.005
00081258	0.146	<T 0.004	B 0.050	<W 0.013	<T 0.007	<W 0.025	<W 0.001
00081295	0.276	0.054	0.102	0.363	0.276	0.334	<W 0.001
00081337	B 0.457	D 0.066	D 0.103	B 0.604	D 0.634	D 0.501	<W 0.001
00081381	0.259	0.076	0.093	0.315	0.467	<T 0.029	0.010
00081439	0.248	<T 0.014	0.143	UG 0.802	UG 0.764	UG 0.363	0.007
00081475	0.145	0.087	0.145	UG 0.566	UG 0.639	UG 0.261	BL ****
00081507	UG 0.338	<T 0.023	UG 0.868	UG 0.307	0.307	UG 0.147	0.016
00081531	0.115	0.029	0.110	0.180	UG 0.245	0.118	0.012
00081565	0.242	0.060	0.214	0.624	UG 0.645	UG 0.292	0.017

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00081135	0.0032	0.004	0.00077	0.0010	0.0106	0.00238	0.6046
00081167	0.0039	0.002	0.00287	0.0008	0.0189	0.02098	0.7033
00081198	0.0051	0.003	0.00215	0.0003	0.0335	0.00484	0.5429
00081227	D 0.0088	0.002	<T 0.00136	<W 0.0007	0.0190	D 0.01122	0.8821
00081258	<W 0.0013	<T 0.001	0.00267	<T 0.0011	<T 0.0017	0.00814	LG 0.3625
00081295	UG 0.0138	0.003	<T 0.00131	<T 0.0009	0.0116	0.00110	0.7155
00081337	B 0.0177	0.003	0.00192	<T 0.0013	D 0.0162	<W 0.00003	0.8226
00081381	0.0107	0.003	0.00353	<T 0.0010	0.0107	0.00120	0.9777
00081439	UG 0.0248	UG 0.006	<T 0.00153	UG 0.0015	0.0130	<T 0.00038	0.5154
00081475	UG 0.0160	0.003	<T 0.00102	UG 0.0012	0.0119	<T 0.00044	0.6243
00081507	UG 0.0126	<T 0.002	<T 0.00154	<T 0.0015	0.0157	<T 0.00092	UG 1.1978
00081531	UG 0.0082	0.002	<T 0.00131	<T 0.0008	0.0113	<T 0.00065	0.5727
00081565	UG 0.0191	0.004	<T 0.00151	UG 0.0016	0.0191	<T 0.00050	0.4633

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NE STATION=MCKELLAR LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00081138	AP02482	AS	02	01	JAN 26, 1988	DEC 29, 1987	0815	0845	1	84694	
00081169	AP02498	AS	02	01	FEB 23, 1988	JAN 26, 1988	0840	0815	1	82316	
00081200	AP02544	AS	02	01	MAR 23, 1988	FEB 23, 1988	0840	0840	1	87224	
00081229	AP02566	AS	02	01	APR 19, 1988	MAR 23, 1988	0835	0840	1	77184	
00081260	AP02612	AS	02	01	MAY 17, 1988	APR 19, 1988	0835	0835	1	78806	
00081297	AP02635	AS	02	01	JUN 14, 1988	MAY 17, 1988	0835	0835	1	93163	
00081339	AP02689	AS	02	01	JUL 12, 1988	JUN 14, 1988	0830	0835	1	68979	
00081383	AP02741	AS	02	01	AUG 9, 1988	JUL 12, 1988	0810	0830	1	67694	
00081441	AP02915	AS	02	01	SEP 6, 1988	AUG 9, 1988	0830	0810	1	71228	
00081477	AP02864	AS	02	01	OCT 4, 1988	SEP 6, 1988	0835	0830	1	61837	
00081509	AP02915	AS	02	01	NOV 1, 1988	OCT 4, 1988	0845	0835	1	65827	
00081533	AP02919	AS	02	01	NOV 29, 1988	NOV 1, 1988	0830	0845	1	77639	
00081567	AP02947	AS	02	01	DEC 28, 1988	NOV 29, 1988	0830	0830	1	88653	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3
00081138				11.87	2.53	0.175	0.413	0.341
00081169				9.59	2.50	0.213	0.310	0.066
00081200				6.70	2.08	0.115	0.304	0.109
00081229				3.77	2.80	0.136	0.285 D	0.518
00081260				2.54	2.58	0.070	0.228 <W	0.025
00081297		A		2.34	1.52	0.046	0.097 <W	0.021
00081339				3.71	3.75	0.101	0.232 <W	0.029
00081383				3.29	5.19	0.081	0.096 <W	0.030
00081441				3.91	3.44	0.104	0.119	0.154
00081477				3.33	3.17	0.136	0.121	0.231
00081509				6.88	2.01	0.112 UG	0.266	0.152
00081533				4.81	2.85	0.183	0.283	0.115
00081567				13.49	2.46	0.167	0.400	0.135

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=NE STATION=MCKELLAR LOVOL SITE NO.1

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00081138	B 0.614	0.047	0.292	0.087	0.048	0.046	0.004
00081169	0.498	0.038	0.270	0.063	0.067	0.013	0.002
00081200	0.499	0.025	0.288	0.056	0.048	0.042	0.003
00081229	0.292	0.026	0.130	UG 0.244	0.124	D 0.175	<T 0.004
00081260	0.197	0.026	0.085	<W 0.013	0.072	<W 0.025	<T 0.003
00081297	0.134	0.024	LG 0.061	0.118	0.058	0.172	<T 0.001
00081339	0.275	0.043	0.072	0.159	0.159	0.319	<W 0.001
00081383	0.214	0.054	0.083	0.103	0.095	<W 0.030	0.013
00081441	0.140	<T 0.007	LG 0.039	<T 0.055	0.055	<T 0.039	0.008
00081477	0.146	0.049	0.158	0.128	0.071	0.046	|BL ****
00081509	0.152	<T 0.015	0.422	<T 0.052	0.043	<T 0.035	0.010
00081533	0.193	0.032	0.142	<W 0.006	0.033	<T 0.027	0.012
00081567	0.361	0.051	0.243	0.058	0.041	0.042	UG 0.062

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00081138	0.0018	0.003	0.00035	0.0008	LG 0.0015	0.00235	0.6966
00081169	0.0030	0.003	0.00340	0.0010	0.0298	0.01115	0.8382
00081200	0.0029	0.005	0.00344	0.0002	0.0126	0.00578	0.6592
00081229	<T 0.0039	0.002	<T 0.00130	<T 0.0008	0.0155	0.00748	B 0.1211
00081260	<T 0.0063	0.002	0.00343	<T 0.0010	0.0127	0.00466	0.8185
00081297	<T 0.0032	0.002	<T 0.00086	<W 0.0005	0.0059	0.00204	0.5206
00081339	<T 0.0058	0.003	<T 0.00087	<W 0.0007	0.0094	<T 0.00006	D 1.6237
00081383	<T 0.0037	B 0.024	0.00458	<W 0.0007	0.0111	0.00177	B 2.1272
00081441	0.0035	0.002	<T 0.00126	<T 0.0004	0.0083	<T 0.00042	0.6458
00081477	0.0042	0.003	<W 0.00032	<T 0.0005	0.0100	<T 0.00016	0.7439
00081509	0.0038	0.002	<T 0.00152	<T 0.0006	0.0102	<T 0.00061	UG 0.8659
00081533	0.0036	0.002	<T 0.00129	0.0008	0.0142	<T 0.00039	0.6826
00081567	0.0035	0.004	<T 0.00169	0.0007	0.0135	<T 0.00056	0.6768

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NE STATION=MOONBEAM LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00081139	AP02482	AS	02	01	JAN 26, 1988	DEC 30, 1987	1348	1430	1	81220	
00081171	AP02498	AS	02	01	FEB 23, 1988	JAN 26, 1988	1430	1348	1	77870	
00081202	AP02544	AS	02	01	MAR 23, 1988	FEB 23, 1988	1050	1430	1	87640	
00081231	AP02566	AS	02	01	APR 19, 1988	MAR 23, 1988	1605	1050	1	80250	
00081262	AP02612	AS	02	01	MAY 17, 1988	APR 19, 1988	1445	1605	1	82240	
00081299	AP02635	AS	02	01	JUN 14, 1988	MAY 17, 1988	2145	1445	1	78070	
00081341	AP02689	AS	02	01	JUL 18, 1988	JUN 14, 1988	1655	2145	1	92710	
00081385	AP02741	AS	02	01	AUG 14, 1988	JUL 18, 1988	2045	1655	1	73920	
00081443	AP02915	AS	02	01	SEP 6, 1988	AUG 14, 1988	1635	2045	1	63220	
00081479	AP02864	AS	02	01	OCT 4, 1988	SEP 6, 1988	1855	1635	1	78410	
00081511	AP02915	AS	02	01	NOV 1, 1988	OCT 4, 1988	1950	1855	1	81540	
00081534	AP02919	AS	02	01	NOV 29, 1988	NOV 1, 1988	1735	1950	1	81683	
00081569	AP02947	AS	02	01	DEC 28, 1988	NOV 29, 1988	1635	1735	1	86716	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3		SULFATE UG/M3		NITRIC UG/M3		NITRATE UG/M3		CALCIUM UG/M3	
00081139		A		2.70		1.23		0.037		0.148		B	2.013
00081171		B		1.66		1.48		0.042		0.096			0.026
00081202				3.86		1.32		LG 0.014		0.091			0.070
00081231				1.54		1.97		0.044		0.056		<T	0.062
00081262				0.58		1.61		LG 0.018		0.073			0.148
00081299				0.50		1.01		<T 0.010		<T 0.026		D	0.615
00081341		Q	Z	0.98		1.98		0.030		0.065			0.237
00081385				0.49	LG	0.86		0.024		0.047		<W	0.027
00081443			Z	0.83		1.74		<T 0.013		0.055		UG	0.712
00081479				1.23		1.62		LG 0.023		0.045			0.244
00081511				1.34		1.23		LG 0.017		0.067			0.147
00081534				1.52		1.66		0.047		0.073			0.073
00081569				1.82		1.40		0.030		0.075			0.089

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NE STATION=MOONBEAM LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00081139	0.259	0.033	0.201	B 1.450	B 0.246	UG 0.430	0.005
00081171	0.218	0.032	0.193	0.030	0.028	0.017	0.002
00081202	0.262	0.025	0.194	0.036	0.031	0.047	LG 0.001
00081231	0.174	0.025	0.168	<T 0.026	0.056	<W 0.025	<T 0.005
00081262	0.170	0.023	0.091	0.063	0.244	<W 0.024	<T 0.002
00081299	0.199	0.036	0.091	0.307	0.359	0.461	<W 0.001
00081341	0.151	0.049	0.073	0.151	0.183	0.313	<W 0.001
00081385	0.169	0.045	0.101	0.126	0.284	<W 0.027	0.011
00081443	0.206	<T 0.008	0.111	0.130	0.174	UG 0.150	0.005
00081479	0.140	0.051	0.166	0.088	0.122	0.065	|BL ****
00081511	0.184	<T 0.020	0.196	<T 0.031	0.034	0.038	0.006
00081534	0.098	0.024	0.116	<W 0.006	0.022	<T 0.026	0.004
00081569	0.254	0.058	0.228	<T 0.029	0.016	0.043	0.006

SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMIUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00081139	0.0025	0.002	LG 0.00012	0.0002	0.0059	0.00177	0.4248
00081171	0.0026	0.003	0.00565	0.0009	0.0186	0.01698	0.4623
00081202	0.0023	0.003	0.00377	0.0006	0.0103	0.01021	0.3937
00081231	<T 0.0031	0.002	<T 0.00125	<W 0.0006	0.0118	0.00621	0.8947
00081262	0.0073	0.006	0.00231	<T 0.0007	0.0091	0.00636	LG 0.3769
00081299	0.0096	0.003	<T 0.00102	<T 0.0009	<T 0.0032	0.00060	LG 0.3049
00081341	<T 0.0054	0.002	0.00334	<W 0.0005	<T 0.0049	0.00012	0.5264
00081385	<T 0.0061	0.002	0.00365	<W 0.0007	<T 0.0054	0.00108	LG 0.3626
00081443	0.0054	0.003	<T 0.00063	<T 0.0005	0.0057	<T 0.00016	0.4113
00081479	0.0048	0.002	<W 0.00026	<T 0.0004	0.0062	<T 0.00013	0.5101
00081511	0.0025	<T 0.001	<T 0.00049	<T 0.0004	0.0067	<T 0.00037	0.4906
00081534	0.0028	0.001	<T 0.00049	<T 0.0002	0.0073	<T 0.00024	0.3550
00081569	0.0022	0.001	<W 0.00023	<T 0.0002	0.0115	<T 0.00058	0.4613

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NE STATION=MOOSONEE LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00081140	AP02482	AS	02	01	JAN 26, 1988	DEC 29, 1987	2035	1730	1	84879	
00081172	AP02498	AS	02	01	FEB 23, 1988	JAN 26, 1988	2030	2035	1	94000	
00081203	AP02544	AS	02	01	MAR 22, 1988	FEB 23, 1988	1829	2030	1	94750	
00081232	AP02566	AS	02	01	APR 19, 1988	MAR 22, 1988	2200	1829	1	92018	
00081263	AP02612	AS	02	01	MAY 17, 1988	APR 19, 1988	1945	2200	1	80185	
00081300	AP02635	AS	02	01	JUN 14, 1988	MAY 17, 1988	1827	1945	1	67982	
00081342	AP02689	AS	02	01	JUL 12, 1988	JUN 14, 1988	2030	1827	1	81203	
00081386	AP02741	AS	02	01	AUG 9, 1988	JUL 12, 1988	1810	2030	1	81065	
00081444	AP02915	AS	02	01	SEP 7, 1988	AUG 9, 1988	1838	1810	1	64815	
00081480	AP02864	AS	02	01	OCT 4, 1988	SEP 7, 1988	1800	1838	1	54315	
00081512	AP02915	AS	02	01	NOV 2, 1988	OCT 4, 1988	1730	1800	1	83574	
00081536	AP02919	AS	02	01	DEC 1, 1988	NOV 2, 1988	1230	1730	1	72854	
00081570	AP02947	AS	02	01	DEC 29, 1988	DEC 1, 1988	1215	1230	1	73104	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3
00081140				0.95	0.95	0.021	0.082	0.071
00081172				1.15	1.18	0.013	0.053	0.055
00081203		E		0.58	1.22	0.011	0.053	0.028
00081232				1.05	2.08	0.030	0.038 <T	0.033
00081263				0.29	1.09	0.016	0.050 <W	0.025
00081300		AC		0.86	0.65	<W 0.003	0.037 <T	0.056
00081342				0.31	0.68	0.012	<T 0.006 <W	0.025
00081386				0.22	0.43	0.022	<W 0.006 <T	0.065
00081444		B		0.60	0.63	<T 0.009	<T 0.015	0.355
00081480		B		1.04	1.05	<T 0.018	0.028	0.153
00081512				1.48	0.99	0.014	<T 0.024	0.085
00081536				1.77	1.44	0.019	<T 0.041	0.074
00081570				1.12	1.14	0.016	0.048 <T	0.057

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
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---------- REGION=NE STATION=MOOSONEE LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00081140	0.342	0.012	0.247	0.012	0.012	0.034	0.001
00081172	0.372	0.023	0.251	0.021	0.022	0.061	0.002
00081203	0.639	0.013	0.347	0.020	0.013	0.056	0.001
00081232	0.168	0.016	0.196	<T 0.053	0.036	<W 0.022	<T 0.002
00081263	0.193	0.015	LG 0.105	<W 0.012	<T 0.012	<W 0.025	<T 0.002
00081300	0.279	0.017	0.149	<T 0.059	<T 0.028	0.265	<W 0.001
00081342	0.369	0.040	UG 0.259	<T 0.050	<T 0.026	0.259	<W 0.001
00081386	0.265	0.027	0.163	0.068	0.062	<W 0.025	<T 0.006
00081444	0.355	<T 0.008	0.096	<T 0.025	0.034	0.074	0.001
00081480	0.423	0.037	0.322	<W 0.009	0.014	0.050	|BL ****
00081512	0.132	<T 0.006	0.203	<T 0.009	0.016	<T 0.025	0.008
00081536	0.288	0.021	0.244	<W 0.007	0.012	<T 0.036	0.008
00081570	0.287	0.027	0.253	<T 0.021	0.011	0.042	0.005

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00081140	0.0009	0.001	0.00012	0.0002	0.0009	0.00181	0.3534
00081172	0.0011	0.002	0.00394	0.0007	0.0080	0.01487	0.3117
00081203	0.0011	0.001	0.00908	0.0007	0.0045	0.01726	0.1953
00081232	<T 0.0016	0.001	<T 0.00109	<W 0.0005	0.0071	0.00517	0.5847
00081263	<T 0.0019	<T 0.001	0.00237	<T 0.0007	<T 0.0016	0.00667	0.3118
00081300	<T 0.0037	<T 0.001	<T 0.00118	<T 0.0029	<W 0.0015	0.00544	0.2692
00081342	<T 0.0049	0.002	<W 0.00025	<W 0.0006	<T 0.0025	<T 0.00004	0.2561
00081386	UG 0.0247	0.002	0.00395	<W 0.0006	<T 0.0031	0.00096	LG 0.1480
00081444	0.0020	0.002	<T 0.00046	<T 0.0002	0.0026	<W 0.00008	0.0926
00081480	0.0011	0.003	<W 0.00037	<W 0.0002	0.0033	<T 0.00018	0.4603
00081512	0.0013	0.001	<W 0.00024	<T 0.0002	0.0035	<T 0.00024	0.4427
00081536	0.0012	<T 0.001	<T 0.00041	<T 0.0001	0.0051	<T 0.00027	0.4667
00081570	0.0011	<T 0.001	<W 0.00027	<T 0.0001	0.0036	<T 0.00014	0.4514

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NE STATION=TURKEY LAKES LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00081136	AP02482	AS	02	01	JAN 26, 1988	DEC 29, 1987	1240	1230	1	75131	
00081168	AP02498	AS	02	01	FEB 23, 1988	JAN 26, 1988	1130	1240	1	79768	
00081199	AP02544	AS	02	01	MAR 22, 1988	FEB 23, 1988	1000	1130	1	75364	
00081228	AP02566	AS	02	01	APR 19, 1988	MAR 22, 1988	1210	1000	1	79667	
00081259	AP02612	AS	02	01	MAY 17, 1988	APR 19, 1988	0900	1210	1	80794	
00081296	AP02635	AS	02	01	JUN 14, 1988	MAY 17, 1988	1130	0900	1	78707	
00081338	AP02689	AS	02	01	JUL 12, 1988	JUN 14, 1988	1230	1130	1	84515	
00081382	AP02741	AS	02	01	AUG 9, 1988	JUL 12, 1988	1115	1230	1	81820	
00081440	AP02915	AS	02	01	SEP 6, 1988	AUG 9, 1988	1050	1115	1	81858	
00081476	AP02864	AS	02	01	OCT 4, 1988	SEP 6, 1988	1150	1050	1	80673	
00081508	AP02915	AS	02	01	NOV 1, 1988	OCT 4, 1988	1250	1150	1	81232	
00081532	AP02919	AS	02	01	NOV 29, 1988	NOV 1, 1988	1400	1250	1	81172	
00081566	AP02947	AS	02	01	DEC 27, 1988	NOV 29, 1988	1400	1400	1	74943	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	
00081136				5.89	1.61	0.093	0.273		0.347
00081168				4.05	1.72	0.116	0.232		0.058
00081199		B		1.78	1.54	0.060	0.166	D	0.200
00081228				2.51	2.10	0.129	0.113	<T	0.044
00081259				1.43	1.68	0.034	0.105	<W	0.025
00081296				2.96	2.49	0.038	0.152	<T	0.029
00081338				2.20	3.49	0.089	0.177	<W	0.024
00081382				1.20	2.26	0.079	0.086	<W	0.024
00081440				1.16	2.26	0.061	0.061		0.134
00081476				0.88	1.88	0.047	0.068		0.212
00081508				2.26	1.46	0.057	0.142		0.185
00081532				3.83	2.30	0.163	0.197		0.069
00081566				2.59	1.47	0.088	0.180		0.100

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NE STATION=TURKEY LAKES LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00081136	0.253	0.025	0.159	0.123	0.053	0.098	0.001
00081168	0.201	0.018	0.144	0.052	B 0.203	D 0.075	0.009
00081199	0.239	0.015	0.141	0.084	0.049	0.092	LG 0.001
00081228	0.276	0.025	0.144	<T 0.057	0.086	<W 0.025	<T 0.004
00081259	0.130	0.024	0.106	<W 0.012	0.068	<W 0.025	<W 0.001
00081296	0.172	0.055	0.095	0.140	0.075	0.229	<W 0.001
00081338	0.189	0.053	0.074	0.118	0.105	0.284	<W 0.001
00081382	0.134	D 0.082	0.074	0.079	0.077	<W 0.024	<T 0.004
00081440	LG 0.073	<T 0.009	LG 0.049	<T 0.017	0.031	<T 0.029	LG 0.002
00081476	0.149	0.050	0.211	0.086	0.108	0.064	IBL ****
00081508	0.111	<T 0.015	0.215	<T 0.041	0.034	0.039	0.005
00081532	0.111	0.022	0.077	<W 0.006	0.026	<T 0.020	0.005
00081566	0.227	0.037	0.203	<T 0.048	0.027	<T 0.039	0.006

SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMIUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00081136	0.0020	0.002	0.00040	0.0004	0.0044	0.00169	0.6429
00081168	D 0.0088	0.004	0.00514	0.0010	0.0313	0.01257	0.6456
00081199	0.0020	0.002	0.00451	0.0004	LG 0.0027	0.00750	0.5215
00081228	<T 0.0044	0.002	<T 0.00113	<W 0.0006	0.0151	0.00468	1.0230
00081259	<T 0.0050	0.002	0.00248	<T 0.0010	<T 0.0028	0.00442	0.6845
00081296	0.0070	0.003	<T 0.00102	<W 0.0006	0.0083	0.00127	0.8322
00081338	<T 0.0059	0.003	<T 0.00035	<W 0.0006	0.0101	<W 0.00002	0.8460
00081382	<T 0.0043	0.009	0.00403	<W 0.0006	0.0079	0.00099	0.7064
00081440	0.0026	<T 0.001	<T 0.00061	<T 0.0004	0.0055	<T 0.00012	0.4887
00081476	0.0045	0.002	<W 0.00025	<T 0.0004	0.0057	<T 0.00012	0.4339
00081508	0.0031	0.002	<T 0.00037	<T 0.0004	0.0063	<T 0.00025	0.5293
00081532	0.0037	0.001	<T 0.00123	<T 0.0005	0.0136	UG 0.01232	0.5544
00081566	0.0027	0.002	<T 0.00040	<T 0.0003	0.0063	<T 0.00013	0.6005

PART V

NORTHWESTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NW STATION=DORION LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00085009	AP02482	AS	02	01	JAN 26, 1988	DEC 29, 1987	0902	0845	1	78764	
00085011	AP02484	AS	02	01	FEB 23, 1988	JAN 26, 1988	0908	0906	1	58878	
00085013	AP02544	AS	02	01	MAR 22, 1988	FEB 23, 1988	0935	0911	1	82307	
00085015	AP02566	AS	02	01	APR 19, 1988	MAR 22, 1988	0922	0942	1	80599	
00085017	AP02628	AS	02	01	MAY 17, 1988	APR 19, 1988	0902	0934	1	82119	
00085019	AP02671	AS	02	01	JUN 14, 1988	MAY 17, 1988	0905	0907	1	80193	
00085021	AP02696	AS	02	01	JUL 12, 1988	JUN 14, 1988	1020	0910	1	80504	
00085023	AP02773	AS	02	01	AUG 9, 1988	JUL 12, 1988	0915	1020	1	78852	
00085025	AP02816	AS	02	01	SEP 6, 1988	AUG 9, 1988	0930	0918	1	64041	
00085027	AP02870	AS	02	01	OCT 4, 1988	SEP 6, 1988	0920	0932	1	73843	
00085029	AP02891	AS	02	01	NOV 1, 1988	OCT 4, 1988	0910	0922	1	81760	
00085031	AP02980	AS	02	01	NOV 29, 1988	NOV 1, 1988	0900	0913	1	82771	
00085033	AP02980	AS	02	01	DEC 28, 1988	NOV 29, 1988	0945	0904	1	88998	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3		SULFATE UG/M3		NITRIC UG/M3		NITRATE UG/M3		CALCIUM UG/M3	
00085009				1.62		1.45		0.038		0.197		0.095	
00085011		A		1.71		1.14		0.076		0.161		0.034	
00085013				0.75	LG	0.16		0.024	<T	0.024		0.024	
00085015				1.11		1.44		0.037		0.068	<W	0.025	
00085017				0.30		0.84		0.021		0.061	<W	0.024	
00085019				1.48		1.45		0.025		0.094		0.324	
00085021				0.45		1.43		0.031		0.087	<W	0.025	
00085023				1.39		0.61	UG	0.114	<T	0.025	<T	0.082	
00085025		A		0.34		0.48		0.020		0.039	<W	0.031	
00085027		A		0.11	<W	0.35		0.016	<T	0.027		0.147	
00085029		B		0.56		0.80		0.020		0.080		0.147	
00085031		B		0.57		1.38		0.046		0.103		0.070	
00085033		Q		1.18		1.16		0.031		0.084		0.076	

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NW STATION=DORION LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00085009	0.260	0.016	0.222	0.027	0.032	D 0.027	0.001
00085011	0.229	0.024	0.162	0.030	0.039	0.020	0.004
00085013	0.140	<W 0.002	0.058	0.029	0.003	0.006	0.001
00085015	0.112	0.012	0.136	<T 0.019	0.054	<W 0.025	<T 0.002
00085017	!CR ****	<T 0.007	0.080	<W 0.012	0.038	<W 0.024	<T 0.005
00085019	0.137	0.037	0.094	0.249	0.474	0.661	<T 0.002
00085021	0.099	0.050	0.080	0.091	0.062	<W 0.025	<T 0.004
00085023	0.082	0.044	0.080	<T 0.053	0.038	0.172	<W 0.001
00085025	0.125	0.020	0.113	<T 0.032	0.242	<W 0.031	<W 0.002
00085027	0.122	0.012	0.132	<T 0.035	0.056	0.037	!BL ****
00085029	0.122	<T 0.018	0.153	<T 0.057	0.050	0.046	0.002
00085031	0.121	0.018	0.121	<T 0.010	0.016	<T 0.024	0.006
00085033	0.202	0.020	0.194	<T 0.024	0.016	0.036	0.007

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00085009	0.0025	0.001	0.00025	0.0003	D 0.0095	0.00250	0.4634
00085011	0.0017	0.003	0.00798	0.0010	0.0051	0.01586	1.1261
00085013	0.0010	D 0.003	0.00668	0.0002	0.0006	0.00870	0.3864
00085015	<T 0.0025	<T 0.001	<T 0.00099	<W 0.0006	0.0093	0.01082	1.0149
00085017	<T 0.0037	<T 0.001	0.00280	<W 0.0006	<W 0.0012	0.00230	0.1741
00085019	0.0087	0.002	<T 0.00087	<T 0.0009	0.0069	0.00474	0.3280
00085021	<T 0.0050	0.004	0.00634	<T 0.0010	UG 0.0646	0.00770	0.3391
00085023	<T 0.0025	0.004	0.00736	<T 0.0013	<W 0.0013	0.00389	0.2536
00085025	<W 0.0016	0.003	0.00453	<W 0.0008	<W 0.0016	0.00066	0.2483
00085027	0.0019	<W 0.000	<W 0.00027	<T 0.0001	0.0019	0.01192	0.1490
00085029	0.0023	<T 0.000	<T 0.00037	<T 0.0001	0.0027	<T 0.00012	0.4892
00085031	0.0016	0.001	<T 0.00048	<T 0.0002	0.0057	<T 0.00048	0.3624
00085033	0.0012	<T 0.001	<T 0.00056	<T 0.0003	0.0042	<T 0.00022	0.3146

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NW STATION=EAR FALLS LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00034300	AP02482	AS	02	01	JAN 26, 1988	DEC 29, 1987	0900	0900	1	55049	
00085601	AP02484	AS	02	01	FEB 23, 1988	JAN 26, 1988	1115	0900	1	87365	
00085602	AP02544	AS	02	01	MAR 22, 1988	FEB 23, 1988	1000	1115	1	112392	
00085603	AP02566	AS	02	01	APR 19, 1988	MAR 22, 1988	0900	1000	1	77467	
00085604	AP02628	AS	02	01	MAY 17, 1988	APR 19, 1988	0911	0900	1	80913	
00085605	AP02671	AS	02	01	JUN 14, 1988	MAY 17, 1988	0900	0911	1	3700	
00085606	AP02696	AS	02	01	JUL 13, 1988	JUN 14, 1988	1500	0900	1	2941	
00085607	AP02773	AS	02	01	AUG 9, 1988	JUL 13, 1988	0900	1500	1	38894	
00085608	AP02816	AS	02	01	SEP 6, 1988	AUG 9, 1988	0910	0900	1	39384	
00085609	AP02870	AS	02	01	OCT 4, 1988	SEP 6, 1988	0900	1500	1	50093	
00085610	AP02891	AS	02	01	NOV 1, 1988	OCT 4, 1988	0900	0900	1	42156	
00085611	AP02980	AS	02	01	NOV 29, 1988	NOV 1, 1988	1330	0900	1	54496	
00085612	AP02980	AS	02	01	DEC 28, 1988	NOV 29, 1988	0900	1330	1	90141	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3		SULFATE UG/M3		NITRIC UG/M3		NITRATE UG/M3		CALCIUM UG/M3	
00034300		A		1.04		1.23		0.045		0.145		0.068	
00085601				1.49		0.97		0.069		0.097		0.023	
00085602		A		0.79		1.30		0.031		0.067		0.048	
00085603				1.35		1.11		0.052		0.058	<T	0.039	
00085604				0.54		1.66		0.022		0.111	<W	0.025	
00085605		A	F	U 23.41	U	4.59	D	0.054	D	0.946	U	0.541	
00085606		A	F	U 1.25	U	1.70	D	0.068	D	1.020	U	0.680	
00085607		A	2	B 2.56		0.50	<W	0.005	<T	0.026	<T	0.089	
00085608		C	F	0.36	LG	0.19	<T	0.020	<W	0.013	<W	0.051	
00085609		C		<T 0.19		0.60		0.020	<T	0.050		0.271	
00085610		A		0.50		0.97		0.024		0.071		0.216	
00085611		A		0.41	LG	0.31		0.029		0.073	<T	0.068	
00085612		Q		1.76		1.44		0.042		0.105		0.081	

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
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CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NW STATION=EAR FALLS LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE		POTASSIUM		SODIUM		IRON		ALUMINIUM		MAGNESIUM		LEAD	
	UG/M3		UG/M3		UG/M3		UG/M3		UG/M3		UG/M3		UG/M3	
00034300		0.200	<T	0.015		0.150		0.037		0.018		0.014		0.001
00085601		0.177		0.019		0.130		0.026		0.029		0.010		0.003
00085602		0.209		0.017	D	0.182		0.051	D	0.067		0.032		0.002
00085603		0.168		0.013		0.129	<T	0.017		0.059	<W	0.026	<W	0.001
00085604		0.142		0.018		0.098	<W	0.012		0.094	<W	0.025	<W	0.001
00085605	U	4.595	U	0.203	U	2.838	U	1.000	U	0.251	U	5.676	U	0.027
00085606	U	3.060	U	0.102	U	1.581	U	0.340	U	0.170	U	0.680	U	0.044
00085607		0.206		0.045		0.136	<T	0.090	<W	0.013	<T	0.181	<W	0.003
00085608	UG	0.330		0.013		0.116	<W	0.025		0.281	<W	0.051	<W	0.003
00085609		0.220		0.030		0.130	<T	0.054		0.088		0.057	BL	****
00085610	UG	0.261	<T	0.012	UG	0.391	<T	0.109		0.095	<T	0.062		0.003
00085611		0.239	<W	0.005		0.147	<T	0.037		0.011	<T	0.015		0.003
00085612		0.244		0.028		0.222	<T	0.018		0.024		0.039		0.006

SAMPLE NUMBER	MANGANESE		COPPER		NICKEL		VANADIUM		ZINC		CADMIUM		SULFATE NYL	
	UG/M3		UG/M3		UG/M3		UG/M3		UG/M3		UG/M3		UG/M3	
00034300		0.0009		0.003	B	0.02580		0.0004		0.0015		0.00260		0.5631
00085601		0.0017		0.001		0.00744		0.0007		0.0074		0.01446		0.9477
00085602	D	0.0022		0.001		0.00231		0.0002	D	0.0062		0.00779		0.2669
00085603	<T	0.0026	<T	0.001	<T	0.00129	<T	0.0009	<T	0.0065		0.00862		1.2818
00085604		0.0068	<T	0.001		0.00222	<T	0.0009		0.0068		0.00253		0.1916
00085605	U	0.0270	U	0.024	U	0.06216	U	0.0243	U	0.0486	U	0.10270	U	2.0270
00085606	U	0.0340	U	0.020	U	0.21081	U	0.0408	U	0.6800	U	0.15641	U	1.3601
00085607	<T	0.0033	<T	0.002		0.00797	<T	0.0026	<W	0.0026	D	0.01535		0.3034
00085608	<W	0.0025	<T	0.003		0.00686	<W	0.0013	UG	0.0381		0.00086	LG	0.0521
00085609		0.0034	<T	0.000	<W	0.00040	<T	0.0002		0.0052		0.02396		0.1996
00085610		0.0045	<W	0.000	<T	0.00071	<T	0.0002		0.0031	<T	0.00024		0.4981
00085611	<T	0.0007	<T	0.001	<W	0.00037	<W	0.0002	<W	0.0002	<T	0.00018		0.1468
00085612		0.0017	<T	0.001	<T	0.00100	<T	0.0003		0.0059	<T	0.00044		0.2773

ONTARIO MINISTRY OF THE ENVIRONMENT
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DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=NW STATION=GERALDTON LOVOL SITE NO.1

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00032789	AP02482	AS	02	01	JAN 26, 1988	DEC 29, 1987	1555	1650	1	95908	
00032790	AP02484	AS	02	01	FEB 23, 1988	JAN 26, 1988	1715	1555	1	84146	
00032791	AP02544	AS	02	01	MAR 22, 1988	FEB 23, 1988	1655	1715	1	86719	
00032792	AP02566	AS	02	01	APR 19, 1988	MAR 22, 1988	1400	1655	1	79001	
00032793	AP02628	AS	02	01	MAY 17, 1988	APR 19, 1988	1445	1400	1	81400	
00032794	AP02671	AS	02	01	JUN 14, 1988	MAY 17, 1988	1515	1445	1	80558	
00032795	AP02696	AS	02	01	JUL 13, 1988	JUN 14, 1988	1200	1515	1	68398	
00032796	AP02773	AS	02	01	AUG 9, 1988	JUL 13, 1988	1435	1200	1	81609	
00032797	AP02816	AS	02	01	SEP 6, 1988	AUG 9, 1988	1440	1435	1	85806	
00032798	AP02870	AS	02	01	OCT 4, 1988	SEP 6, 1988	1136	1440	1	82076	
00032799	AP02891	AS	02	01	OCT 31, 1988	OCT 4, 1988	1600	1440	1	82028	
00032800	AP02980	AS	02	01	NOV 29, 1988	OCT 31, 1988	1110	1600	1	89365	
00032801	AP02980	AS	02	01	DEC 28, 1988	NOV 29, 1988	1000	1110	1	29043	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3
00032789				1.28	1.23	0.039	0.156	0.057
00032790				1.13	1.31	0.089	0.089	0.036
00032791				0.50	0.80	<T 0.009	0.046	0.023
00032792				1.31	1.58	0.028	0.032	<W 0.025
00032793				0.84	0.69	0.034	0.068	<W 0.025
00032794				1.64	1.43	<T 0.009	0.087	0.273
00032795		A		0.62	1.33	0.044	0.124	<W 0.029
00032796		Q	Z	1.46	0.74	0.015	<T 0.018	0.689
00032797				0.37	0.66	0.015	LG 0.017	<T 0.058
00032798				0.34	1.02	0.027	0.043	0.224
00032799		Q		0.60	1.05	0.029	0.085	0.195
00032800		Q		0.67	1.06	0.045	0.101	0.090
00032801		A	F	0.83	0.96	0.041	0.121	<T 0.138

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NW STATION=GERALDTON LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00032789	0.255	0.026	0.210	0.039	0.018	0.014	0.001
00032790	0.143	0.023	0.171	0.030	0.028	0.020	0.001
00032791	0.115	0.016	0.109	0.021	0.011	0.006	0.001
00032792	0.095	<W 0.006	0.070	<T 0.025	<W 0.006	<W 0.025	<T 0.002
00032793	0.141	0.018	0.071	<W 0.012	0.052	<W 0.025	<W 0.001
00032794	0.137	0.043	0.102	0.115	0.067	0.360	<W 0.001
00032795	0.117	0.033	0.113	0.085	<T 0.032	<W 0.029	<W 0.001
00032796	0.123	0.036	0.080	0.074	<T 0.020	0.195	<T 0.002
00032797	0.082	0.015	0.093	<T 0.024	0.153	<W 0.023	<T 0.002
00032798	0.097	UG 0.131	0.131	<T 0.057	0.078	0.067	IBL ****
00032799	0.158	<T 0.006	0.183	<T 0.061	0.049	0.045	0.001
00032800	0.134	0.017	0.140	<T 0.019	0.015	<T 0.025	0.003
00032801	0.275	<T 0.017	0.250	<T 0.045	0.026	<T 0.034	0.005

SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMIUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00032789	0.0008	0.001	0.00021	0.0003	0.0024	0.00206	0.4848
00032790	0.0012	0.002	0.00796	0.0007	0.0077	0.00560	0.5170
00032791	0.0012	0.001	0.00334	D 0.0006	0.0006	0.00399	0.3805
00032792	<W 0.0013	<T 0.000	0.00139	<T 0.0013	<T 0.0032	0.00842	0.5253
00032793	<W 0.0012	<T 0.001	0.00209	<W 0.0006	<T 0.0016	0.01075	0.5467
00032794	<T 0.0050	0.002	<T 0.00099	<W 0.0006	<T 0.0031	0.00261	0.3600
00032795	<T 0.0037	0.002	0.00863	<T 0.0013	<T 0.0051	0.00716	0.4459
00032796	<T 0.0031	0.001	0.00368	<T 0.0012	<T 0.0016	0.00647	0.2916
00032797	<W 0.0012	<T 0.001	0.00303	<W 0.0006	<W 0.0012	0.00027	0.2715
00032798	0.0034	0.015	<W 0.00024	<T 0.0002	UG 0.0122	0.01340	0.3411
00032799	0.0028	0.001	<T 0.00037	<T 0.0002	0.0034	<T 0.00037	0.3901
00032800	0.0012	<T 0.001	<W 0.00022	<T 0.0002	0.0057	<T 0.00011	0.3805
00032801	<T 0.0017	<T 0.001	<W 0.00069	<T 0.0003	0.0038	<T 0.00034	0.9297

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NW STATION=PICKLE LAKE LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00034393	AP02482	AS	02	01	JAN 26, 1988	DEC 29, 1987	1230	1045	1	90336	
00034394	AP02484	AS	02	01	FEB 23, 1988	JAN 26, 1988	1200	1230	1	91597	
00034395	AP02544	AS	02	01	MAR 22, 1988	FEB 23, 1988	1130	1200	1	89686	
00034396	AP02566	AS	02	01	APR 19, 1988	MAR 22, 1988	1230	1130	1	86331	
00034398	AP02628	AS	02	01	MAY 17, 1988	APR 19, 1988	1230	1230	1	85184	
00034399	AP02671	AS	02	01	JUN 21, 1988	MAY 17, 1988	1130	1230	1	96440	
00034400	AP02696	AS	02	01	JUL 12, 1988	JUN 21, 1988	1130	1130	1	61543	
00031095	AP02773	AS	02	01	AUG 10, 1988	JUL 12, 1988	0930	1130	1	84362	
00031096	AP02816	AS	02	01	SEP 8, 1988	AUG 10, 1988	1405	0940	1	83122	
00031097	AP02870	AS	02	01	OCT 4, 1988	SEP 8, 1988	1130	1405	1	72590	
00031098	AP02891	AS	02	01	NOV 2, 1988	OCT 4, 1988	1230	1130	1	65416	
00031099	AP02980	AS	02	01	NOV 29, 1988	NOV 2, 1988	1530	1230	1	77087	
00031100	AP02980	AS	02	01	DEC 27, 1988	NOV 29, 1988	1420	1530	1	86073	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3		SULFATE UG/M3		NITRIC UG/M3		NITRATE UG/M3		CALCIUM UG/M3
00034393				1.66		0.92	D	0.033	D	0.077		0.055
00034394				0.49	LG	0.35		0.016		0.027		0.022
00034395				1.23		0.51		0.020		0.039		0.053
00034396				0.54		0.97		0.012		0.046		0.365
00034398				0.42		1.24		0.023		0.076	D	0.718
00034399			Z	1.40		0.61		0.013		0.062		0.156
00034400		Q	Z	0.19		0.74		0.024		0.073	<W	0.032
00031095		Q	Z	1.23		0.65		0.077	<T	0.012		0.875
00031096		Q		0.29		0.67		0.014		0.036	D	0.505
00031097		Q	Z	<W 0.14		0.51	<T	0.014	<T	0.034		0.294
00031098		A		0.39		0.86		0.015		0.046		0.566
00031099		Q		0.53		1.27		0.036		0.123	UG	0.208
00031100		QA		2.00		1.29		0.033	LG	0.058		0.071

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NW STATION=PICKLE LAKE LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00034393	0.338	<T 0.011	0.178	0.022	0.023	0.006	0.001
00034394	0.104	<T 0.007	0.072	0.017	0.003	0.005	0.002
00034395	0.184	<T 0.009	0.109	0.035	0.028	0.023	0.002
00034396	0.081	0.012	0.093	B 0.203	0.125	D 0.127	0.006
00034398	B 0.399	0.033	B 0.249	B 0.528	D 0.600	<W 0.023	<T 0.003
00034399	0.135	0.031	0.083	0.228	0.228	0.363	0.006
00034400	0.154	0.037	0.103	<W 0.016	0.127	<W 0.032	<T 0.005
00031095	0.142	0.037	0.108	D 0.394	D 0.337	D 0.308	<T 0.006
00031096	0.205	0.029	0.101	D 0.303	0.441	D 0.128	<T 0.003
00031097	0.124	0.017	0.100	<T 0.044	0.068	0.053	|BL ****
00031098	0.168	<T 0.008	0.153	0.214	0.183	UG 0.124	0.010
00031099	0.259	0.016	0.163	UG 0.106	UG 0.049	0.058	0.010
00031100	0.198	0.020	0.227	<T 0.019	0.016	0.043	0.010

SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMIUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00034393	0.0006	0.001	0.00033	0.0002	0.0006	0.00221	0.5978
00034394	0.0011	0.002	0.00622	0.0010	0.0093	0.01221	0.4094
00034395	0.0011	0.001	0.00357	0.0002	0.0009	0.01044	0.8530
00034396	<T 0.0029	<T 0.001	0.00151	<T 0.0009	<T 0.0058	0.00680	0.2062
00034398	UG 0.0153	B 0.015	D 0.00470	<T 0.0014	<T 0.0047	0.00642	0.3111
00034399	0.0057	UG 0.008	0.00187	<W 0.0005	<T 0.0019	0.00384	0.6066
00034400	<T 0.0081	UG 0.009	0.00780	<T 0.0010	<T 0.0065	0.00552	LG 0.1341
00031095	0.0065	B 0.018	0.00332	<W 0.0006	<W 0.0012	0.00690	0.2015
00031096	<T 0.0060	B 0.010	0.00229	<T 0.0008	0.0192	0.00035	0.1720
00031097	0.0022	<T 0.001	<W 0.00028	<T 0.0001	0.0030	0.01929	0.1929
00031098	0.0063	0.005	0.00520	<T 0.0005	0.0031	<T 0.00015	0.3363
00031099	0.0022	UG 0.004	<T 0.00117	<T 0.0003	0.0036	<T 0.00013	0.4411
00031100	0.0012	<T 0.001	<T 0.00116	<T 0.0003	0.0045	<T 0.00046	0.4763

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION-NW STATION=QUETICO CENTRE LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00032677	AP02482	AS	02	01	JAN 26, 1988	DEC 29, 1987	1400	0900	1	85758	
00032678	AP02484	AS	02	01	FEB 23, 1988	JAN 26, 1988	0900	1400	1	86868	
00032679	AP02544	AS	02	01	MAR 22, 1988	FEB 23, 1988	0900	0900	1	72618	
00032680	AP02566	AS	02	01	APR 19, 1988	MAR 22, 1988	0900	0900	1	79859	
00032682	AP02628	AS	02	01	MAY 26, 1988	APR 19, 1988	0900	0900	1	107315	
00032683	AP02671	AS	02	01	JUN 14, 1988	MAY 26, 1988	0900	0900	1	51840	
00032684	AP02696	AS	02	01	JUL 12, 1988	JUN 14, 1988	0900	0900	1	80017	
00032685	AP02773	AS	02	01	AUG 9, 1988	JUL 12, 1988	0900	0900	1	73431	
00032686	AP02816	AS	02	01	SEP 6, 1988	AUG 9, 1988	0900	0900	1	79718	
00032687	AP02870	AS	02	01	OCT 4, 1988	SEP 6, 1988	1100	0900	1	79261	
00032688	AP02891	AS	02	01	NOV 1, 1988	OCT 4, 1988	0900	1100	1	60287	
00032689	AP02980	AS	02	01	NOV 29, 1988	NOV 1, 1988	0900	0900	1	28742	
00032690	AP02980	AS	02	01	DEC 28, 1988	NOV 29, 1988	0900	0900	1	85908	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3		SULFATE UG/M3		NITRIC UG/M3		NITRATE UG/M3		CALCIUM UG/M3	
00032677				1.88		0.95		0.058		0.192		0.093	
00032678				1.49	LG	0.12		0.012		0.029		0.023	
00032679		A		0.89	LG	0.41		0.031		0.048		0.028	
00032680		A		1.00		1.50		0.025		0.063		0.188	
00032682		C	Z	0.66		1.10		0.035		0.089	<W	0.019	
00032683			Z	2.37	UG	2.78	UG	0.058	UG	0.203	<W	0.039	
00032684				0.59		1.39		0.050		0.125	<W	0.025	
00032685		DB		1.52		0.83	UG	0.116		0.048	<T	0.116	
00032686				0.50	D	0.04	<T	0.014		0.031	<T	0.048	
00032687				-	LG	1.34	IRE	****		0.057		0.346	
00032688		A		0.42		0.96		0.023		0.108		0.332	
00032689		A	F	0.51	UG	2.71	UG	0.230	UG	0.522	UG	0.303	
00032690				0.26		0.88	UG	0.077		0.105		0.064	

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=NW STATION=QUETICO CENTRE LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00032677	0.361	0.037	0.174	0.047	0.012	0.012	D 0.003
00032678	0.115	<T 0.002	LG 0.051	0.016	0.003	0.006	0.001
00032679	0.186	<T 0.006	0.093	0.016	0.005	0.007	0.001
00032680	0.194	0.013	0.163	0.073	0.097	<T 0.028	<T 0.005
00032682	0.112	0.015	0.075	<W 0.009	0.067	<W 0.019	<W 0.001
00032683	0.203	0.068	UG 0.149	0.251	0.212	0.502	<W 0.002
00032684	0.112	0.056	0.089	<T 0.062	0.047	<W 0.025	<W 0.001
00032685	0.123	D 0.182	B 0.368	0.086	<W 0.007	0.166	<T 0.002
00032686	0.169	0.030	B 0.282	0.064	0.187	<W 0.025	<W 0.001
00032687	0.164	0.050	0.249	0.126	0.177	0.096	IBL ****
00032688	0.182	<T 0.008	0.083	0.158	0.101	0.075	0.003
00032689	0.418	<T 0.026	0.235	<T 0.101	UG 0.038	<T 0.056	0.011
00032690	0.175	0.020	0.151	<T 0.022	0.015	<T 0.027	0.003

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00032677	0.0017	LG 0.000	0.00093	0.0002	0.0009	0.00171	0.7031
00032678	0.0009	0.004	0.00679	0.0007	0.0006	0.01159	0.3051
00032679	0.0014	0.002	0.00468	0.0003	0.0007	0.00552	0.7891
00032680	<T 0.0031	0.002	<T 0.00125	<T 0.0009	0.0075	0.00900	0.8515
00032682	0.0051	<T 0.001	0.00168	<W 0.0005	<T 0.0047	0.00576	0.6290
00032683	<T 0.0096	0.003	0.00212	<W 0.0010	<T 0.0087	0.00849	0.4630
00032684	<T 0.0056	<T 0.001	0.00687	<T 0.0009	<T 0.0062	0.01375	0.3937
00032685	<T 0.0048	0.002	0.00436	<T 0.0014	<T 0.0068	0.00644	0.3309
00032686	<T 0.0031	0.003	0.00339	<W 0.0006	<W 0.0013	0.00049	0.1668
00032687	0.0066	<T 0.001	<T 0.00088	<T 0.0005	0.0047	0.01388	IRE ****
00032688	0.0060	<T 0.001	<T 0.00249	<T 0.0003	0.0040	<T 0.00017	0.2820
00032689	UG 0.0035	<T 0.002	<T 0.00104	<T 0.0003	0.0090	<T 0.00035	<W 0.0348
00032690	0.0015	<T 0.000	<W 0.00023	<T 0.0002	0.0028	<T 0.00023	<W 0.0116

PART VI

SOUTHEASTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SE STATION=CLOYNE LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00024670	AP02467	AS	02	01	JAN 26, 1988	DEC 29, 1987	1600	1800	1	81542	
00067014	AP02566	AS	02	01	FEB 23, 1988	JAN 26, 1988	1730	1600	1	89990	
00067022	AP02566	AS	02	01	MAR 23, 1988	FEB 23, 1988	1600	1730	1	92451	
00066012	AP02635	AS	02	01	APR 19, 1988	MAR 23, 1988	0740	1730	1	77375	
00024677	AP02783	AS	02	01	MAY 17, 1988	APR 19, 1988	0720	0740	1	74668	
00024678	AP02783	AS	02	01	JUN 14, 1988	MAY 17, 1988	0725	0720	1	71307	
00024679	AP02783	AS	02	01	JUL 12, 1988	JUN 14, 1988	0720	0725	1	61287	
00024680	AP02783	AS	02	01	AUG 9, 1988	JUL 12, 1988	0835	0720	1	79234	
00024681	AP02915	AS	02	01	SEP 6, 1988	AUG 9, 1988	1700	0835	1	79070	
00024682	AP02915	AS	02	01	OCT 4, 1988	SEP 6, 1988	0700	1700	1	79312	
00024683	AP02915	AS	02	01	NOV 1, 1988	OCT 4, 1988	0700	0700	1	83422	
00024684	AP02994	AS	02	01	DEC 10, 1988	NOV 1, 1988	0900	0700	1	118212	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3		SULFATE UG/M3		NITRIC UG/M3	NITRATE UG/M3		CALCIUM UG/M3	
00024670				4.99		3.63		0.163	0.466		0.316	
00067014				10.13		3.36		0.226	0.417		<T	0.089
00067022		Q		6.00		4.27		0.124	0.411			0.130
00066012		Q		2.70	B	9.24		0.094	0.614		<W	0.026
00024677				3.84		3.15		0.097	0.241			0.256
00024678				4.81		4.42		0.123	0.238			0.319
00024679		AB		2.50		8.73		0.086	0.424			0.363
00024680				4.56		7.51		0.101	0.133			0.274
00024681				3.04		6.51		0.144	0.133			0.190
00024682		B		4.85		4.77		0.164	0.158			0.202
00024683				1.24	LG	3.09		0.074	0.264			0.180
00024684		Q	Z	7.13		2.92		0.161	0.393			0.135

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SE STATION=CLOYNE LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00024670	0.601	0.099	0.364	0.074	0.077	0.063	0.006
00067014	0.506	0.089	0.394	<T 0.037	0.033	<W 0.022	0.007
00067022	0.416	B 3.418	0.303	0.061	0.054	<T 0.046	<T 0.005
00066012	0.407	U 79.742	0.212	0.120	0.057	0.233	<W 0.001
00024677	0.321	B 0.524	0.112	0.157	0.073	<T 0.122	<T 0.003
00024678	0.316	0.097	0.108	0.169	0.082	0.164	<T 0.007
00024679	0.457	UCS 10.190	0.130	0.171	0.076	0.192	<T 0.005
00024680	0.208	0.112	0.100	0.131	0.057	<T 0.117	<T 0.003
00024681	0.190	0.177	0.639	0.120	0.092	0.052	0.009
00024682	0.189	0.044	0.255	0.119	0.087	0.053	0.011
00024683	0.168	UG 1.732	0.252	0.074	0.053	<T 0.036	0.009
00024684	0.169	0.171	0.102	0.056	0.033	0.033	0.009

SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMIUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00024670	0.0055	0.004	0.00208	0.0017	0.0196	0.00335	0.6720
00067014	<T 0.0056	0.002	0.00156	<T 0.0016	0.0217	0.00570	0.6612
00067022	0.0092	0.003	0.00119	<T 0.0006	UG 0.0427	0.00498	0.8848
00066012	UG 0.0142	0.002	B 0.00775	<T 0.0028	0.0233	0.00517	2.2359
00024677	0.0080	0.002	0.00308	<T 0.0012	0.0161	0.00730	0.8571
00024678	0.0091	0.003	0.00323	<T 0.0013	0.0224	0.00991	0.9648
00024679	<T 0.0082	B 0.009	0.00441	<T 0.0011	0.0179	0.00848	1.1748
00024680	0.0069	0.003	0.00316	<T 0.0010	0.0240	0.00814	1.4640
00024681	0.0053	0.001	<T 0.00114	<T 0.0005	0.0139	0.01037	1.0750
00024682	0.0057	0.002	<T 0.00126	<T 0.0005	0.0151	0.01147	0.7565
00024683	0.0042	<T 0.001	<T 0.00108	0.0007	0.0132	0.01115	0.8751
00024684	0.0038	0.002	<T 0.00118	0.0011	0.0152	0.00313	1.0033

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SE STATION=DALHOUSIE MILLS LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00024669	AP02467	AS	02	01	JAN 26, 1988	DEC 29, 1987	0800	0800	1	88133	
00067011	AP02566	AS	02	01	FEB 23, 1988	JAN 26, 1988	0800	0800	1	88482	
00067009	AP02566	AS	02	01	MAR 22, 1988	FEB 23, 1988	0800	0800	1	87282	
00066009	AP02635	AS	02	01	APR 19, 1988	MAR 22, 1988	0800	0800	1	86867	
00066015	AP02635	AS	02	01	MAY 17, 1988	APR 19, 1988	0800	0800	1	86480	
00066085	AP02783	AS	02	01	JUN 14, 1988	MAY 17, 1988	1730	0900	1	87253	
00066086	AP02783	AS	02	01	JUL 12, 1988	JUN 14, 1988	0800	1730	1	87515	
00066087	AP02783	AS	02	01	AUG 9, 1988	JUL 12, 1988	0800	0800	1	84932	
00024695	AP02915	AS	02	01	SEP 6, 1988	AUG 9, 1988	2000	0900	1	12602	
00024694	AP02915	AS	02	01	OCT 4, 1988	SEP 8, 1988	0800	2000	1	1528	
00094681	AP02994	AS	02	01	DEC 28, 1988	NOV 29, 1988	0800	1100	1	-	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3		SULFATE UG/M3		NITRIC UG/M3		NITRATE UG/M3		CALCIUM UG/M3	
00024669				UG	14.91		3.71		0.082		0.857		0.857
00067011					9.84		3.57		0.167		0.735		0.396
00067009					7.67	LG	0.28		0.066		0.659		0.859
00066009					3.17		3.73		0.081		0.737		0.518
00066015		C			2.30		2.83		0.052		0.382		0.694
00066085		D			3.64		3.82		0.083		0.315		1.197
00066086		QD			2.98		6.34		0.066		0.274		1.600
00066087		D			3.52		5.84		0.100		0.259		1.097
00024695		C	F	UG	7.96		13.73		0.254		0.913	UG	7.935
00024694		A	FZ	UG	19.63		7.85	<T	0.393	<T	1.636	<T	2.094
00094681		A			****		****		****		****		****

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SE STATION=DALHOUSIE MILLS LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00024669	0.981	0.141	UG 0.597	0.043	0.106	0.079	0.012
00067011	1.017	0.130	UG 0.610	0.080	0.051	<T 0.042	0.013
00067009	0.796	0.097	0.527	0.100	0.107	<T 0.077	0.010
00066009	0.437	0.231	0.246	0.161	0.108	0.288	0.008
00066015	0.312	0.084	0.131	0.208	0.185	0.266	<T 0.004
00066085	0.338	0.085	0.115	0.253	0.198	0.219	0.009
00066086	0.326	UCS 0.543	0.127	0.293	0.253	0.230	0.008
00066087	0.336	0.091	0.114	0.197	0.149	0.202	0.009
00024695	1.428	<T 0.099	3.551	UG 1.111	1.032	0.627	0.044
00024694	7.853	UG 3.599	5.726	<W 0.327	0.327	<T 0.530	<W 0.007
00094681	****	****	****	****	****	****	****

SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMIUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00024669	0.0312	0.004	0.00182	B 0.0071	0.0323	0.00243	0.5991
00067011	D 0.0294	0.003	0.00192	0.0033	0.0333	0.00617	0.5877
00067009	B 0.0458	0.003	0.00126	<T 0.0016	0.0286	0.00416	B 0.0579
00066009	B 0.0656	0.003	0.00173	UG 0.0044	0.0322	0.00530	0.6481
00066015	0.0139	0.003	0.00150	<T 0.0020	0.0220	0.00060	0.5816
00066085	0.0115	0.004	0.00160	<T 0.0007	D 0.0304	0.00414	0.8114
00066086	0.0114	0.005	0.00171	<T 0.0007	0.0274	0.00959	0.9941
00066087	0.0118	0.004	0.00212	<T 0.0013	0.0306	0.00486	0.6358
00024695	UG 0.0492	<T 0.006	<T 0.00635	<T 0.0032	UG 0.0667	0.04126	UG 4.6818
00024694	<T 0.0262	<W 0.007	<T 0.02618	<W 0.0065	UG 0.0720	0.85079	UG 13.7435
00094681	****	****	****	****	****	****	****

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SE STATION=GOLDEN LAKE LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00024668	AP02467	AS	02	01	JAN 25, 1988	DEC 29, 1987	0720	0700	1	96139	
00067010	AP02566	AS	02	01	FEB 23, 1988	JAN 25, 1988	0830	0725	1	78688	
00066010	AP02635	AS	02	01	MAR 23, 1988	FEB 23, 1988	0700	0830	1	81909	
00066011	AP02635	AS	02	01	APR 19, 1988	MAR 23, 1988	0700	0705	1	70607	
00066088	AP02783	AS	02	01	JUN 14, 1988	MAY 17, 1988	0730	0705	1	68623	
00024696	AP02915	AS	02	01	JUL 12, 1988	JUN 14, 1988	0700	0735	1	60141	
00024697	AP02915	AS	02	01	AUG 15, 1988	JUL 12, 1988	1830	0700	1	57657	
00106128	AP03182		02	01	NOV 28, 1988	AUG 15, 1988	0800	1830	1	.	
00094683	AP02994	AS	02	01	DEC 28, 1988	NOV 28, 1988	0800	0800	1	32882	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3		SULFATE UG/M3		NITRIC UG/M3		NITRATE UG/M3		CALCIUM UG/M3	
00024668		Q		UG	14.07		2.95		0.156		0.359		0.140
00067010					7.10		2.64		0.163		0.343	<T	0.076
00066010		Q			5.18		1.94		0.113		0.250	<W	0.024
00066011					2.83		3.06		0.099		0.340	<W	0.028
00066088					4.43		2.40		0.055	<T	0.029	<T	0.043
00024696					2.81		4.77		0.083		0.108		0.266
00024697		Q	Z		1.88		5.36		0.073	<T	0.026		0.173
00106128		AF	Z		****		****		****		****		****
00094683		A	FZ		6.51		2.46		0.091		0.441		0.210

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SE STATION=GOLDEN LAKE LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00024668	0.374	0.071	0.247	0.046	0.035	0.050	0.005
00067010	0.375	0.064	0.273	0.072	<T 0.026	<W 0.025	<T 0.006
00066010	0.330	0.062	0.220	<T 0.052	<T 0.020	0.220	<T 0.004
00066011	0.283	0.074	0.155	<T 0.065	0.042	0.212	<T 0.005
00066088	0.262	0.059	0.108	0.134	D 0.066	0.148	<T 0.003
00024696	0.266	0.029	0.133	0.153	0.135	0.085	0.004
00024697	0.139	0.030	0.715	0.090	0.090	0.059	0.006
00106128	****	****	****	****	****	****	****
00094683	0.380	0.061	0.243	<T 0.073	0.049	<T 0.070	0.013

SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMIUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00024668	0.0042	0.005	0.00146	0.0012	0.0182	0.00283	0.5232
00067010	<T 0.0044	0.005	UG 0.02681	<T 0.0017	0.0191	0.00510	0.6837
00066010	0.0067	0.004	0.00134	<T 0.0010	0.0134	0.00452	0.7386
00066011	0.0120	0.003	0.00170	<T 0.0016	0.0227	0.00283	0.8399
00066088	<T 0.0058	0.004	0.00350	<T 0.0012	0.0092	0.01224	0.8088
00024696	0.0060	<T 0.001	<T 0.00100	<T 0.0003	0.0088	0.02162	1.0974
00024697	0.0045	<T 0.001	<T 0.00121	<T 0.0003	0.0095	0.01700	1.2141
00106128	****	****	****	****	****	****	****
00094683	0.0058	UG 0.004	<T 0.00152	<T 0.0012	0.0204	0.00699	0.9093

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SE STATION=SMITHS FALLS LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00067015	AP02566	AS	02	01	JAN 26, 1988	DEC 30, 1987	0945	1545	1	77378	
00067016	AP02566	AS	02	01	FEB 23, 1988	JAN 26, 1988	0945	0945	1	81592	
00067017	AP02566	AS	02	01	MAR 22, 1988	FEB 23, 1988	1147	0945	1	80926	
00066007	AP02635	AS	02	01	APR 19, 1988	MAR 22, 1988	1115	1147	1	77596	
00066014	AP02635	AS	02	01	MAY 17, 1988	APR 19, 1988	0948	1115	1	74360	
00024689	AP02783	AS	02	01	JUN 14, 1988	MAY 17, 1988	0958	0948	1	73476	
00024690	AP02783	AS	02	01	JUL 12, 1988	JUN 14, 1988	1134	0958	1	64547	
00024691	AP02915	AS	02	01	AUG 9, 1988	JUL 12, 1988	0922	1134	1	75473	
00024698	AP02915	AS	02	01	SEP 6, 1988	AUG 9, 1988	1057	0922	1	84391	
00024699	AP02915	AS	02	01	OCT 4, 1988	SEP 6, 1988	0956	1057	1	85442	
00024700	AP02915	AS	02	01	NOV 1, 1988	OCT 4, 1988	1100	0956	1	87732	
00024718	AP02919	AS	02	01	NOV 29, 1988	NOV 1, 1988	1023	1100	1	77960	
00094687	AP02994	AS	02	01	DEC 29, 1988	NOV 29, 1988	1245	1023	1	96327	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	
00067015				6.00	3.15	0.068	0.523	<T	0.097
00067016				8.36	3.16	0.224	0.545		0.214
00067017				10.81	3.02	0.111	0.692		1.106
00066007				4.44	3.43	0.093	0.612		0.361
00066014		D		2.23	2.73	0.054	0.397		1.224
00024689				3.75	3.58	0.078	0.272		1.494
00024690				4.72	6.51	0.124	0.395		1.819
00024691		Q		3.06	6.03	0.170	0.291		0.808
00024698		C		1.55	4.50	0.100	0.190		0.533
00024699		BQ		4.01	3.78	0.112	0.246		0.492
00024700		Q		3.56	2.02	0.055	0.319		0.502
00024718				4.01	2.55	0.054	0.423		0.410
00094687		Q	Z	5.05	2.42	0.094	0.612		0.706

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=SE STATION=SMITHS FALLS LOVOL SITE NO.1

SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00067015	0.549	0.058	0.381	0.073	0.094	D 0.284	<T 0.006
00067016	0.907	0.116	0.576	B 0.388	<T 0.025	<T 0.046	0.009
00067017	UG 1.192	0.093	UG 0.723	B 0.285	UG 0.190	0.371	0.012
00066007	0.419	0.168	0.238	0.142	0.088	0.348	<T 0.006
00066014	0.316	0.114	0.154	0.256	0.215	0.820	<W 0.001
00024689	0.272	0.055	0.101	0.229	0.173	D 0.609	0.010
00024690	0.457	0.101	0.122	0.312	0.241	0.736	<T 0.008
00024691	0.278	0.036	0.497	0.199	0.159	0.252	0.013
00024698	0.190	0.175	0.234	0.130	0.100	0.178	0.012
00024699	0.164	0.018	0.225	0.117	0.095	0.164	0.014
00024700	0.171	0.023	0.094	0.099	0.072	0.171	0.014
00024718	0.192	0.045	0.128	<W 0.006	0.055	0.126	0.014
00094687	0.519	0.070	0.283	0.114	0.071	0.249	0.011

SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMIUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00067015	0.0213	0.003	<T 0.00103	<T 0.0010	0.0258	D 0.00717	0.6048
00067016	0.0104	0.002	0.00135	<T 0.0018	0.0221	0.00885	0.6104
00067017	0.0111	0.003	0.00148	<T 0.0023	0.0259	0.00874	0.5313
00066007	0.0232	0.004	D 0.00322	<T 0.0027	0.0271	0.00515	0.7900
00066014	0.0161	0.002	<T 0.00094	<T 0.0013	0.0148	0.00767	0.6993
00024689	0.0150	0.002	0.00191	<T 0.0008	0.0163	0.00825	0.9119
00024690	0.0201	0.002	0.00294	<T 0.0011	0.0232	0.00703	1.0380
00024691	0.0129	0.001	<T 0.00106	0.0009	0.0172	0.00874	0.9540
00024698	0.0073	<T 0.001	<T 0.00107	<T 0.0005	0.0094	0.00984	0.7939
00024699	0.0071	0.001	<T 0.00152	0.0007	0.0129	0.00878	0.6086
00024700	0.0074	0.001	<T 0.00148	0.0010	0.0148	0.00467	0.6839
00024718	0.0059	0.002	<T 0.00141	0.0014	0.0154	0.00872	0.4618
00094687	0.0087	0.002	<T 0.00166	UG 0.0026	0.0156	0.00353	0.5954

PART VII

SOUTHWESTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SW STATION=COLCHESTER LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00074481	AP02482	AS	02	01	JAN 26, 1988	DEC 29, 1987	0725	0740	1	81843	
00074486	AP02484	AS	02	01	FEB 23, 1988	JAN 26, 1988	0755	0725	1	51833	
00074509	AP02537	AS	02	01	MAR 22, 1988	FEB 23, 1988	0800	0800	1	81659	
00074514	AP02578	AS	02	01	APR 19, 1988	MAR 22, 1988	1250	1240	1	78945	
00074529	AP02612	AS	02	01	MAY 17, 1988	APR 19, 1988	0747	1250	1	84756	
00074553	AP02635	AS	02	01	JUN 14, 1988	MAY 17, 1988	0618	0747	1	83487	
00074568	AP02672	AS	02	01	JUL 12, 1988	JUN 14, 1988	0725	0618	1	85381	
00074570	AP02724	AS	02	01	AUG 9, 1988	JUL 12, 1988	0700	0741	1	83507	
00074594	AP02798	AS	02	01	SEP 6, 1988	AUG 9, 1988	0720	0700	1	77556	
00074608	AP02896	AS	02	01	OCT 4, 1988	SEP 6, 1988	1120	0725	1	78090	
00074613	AP02896	AS	02	01	NOV 1, 1988	OCT 4, 1988	0740	1120	1	80353	
00074636	AP02952	AS	02	01	NOV 29, 1988	NOV 1, 1988	0750	0750	1	80868	
00074650	AP02980	AS	02	01	DEC 27, 1988	NOV 29, 1988	0810	0750	1	34680	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3		SULFATE UG/M3		NITRIC UG/M3		NITRATE UG/M3		CALCIUM UG/M3	
00074481				11.93		LG 0.34		0.189		LG 0.232		LG 0.076	
00074486		C		15.07		LG 0.69		UG 0.421		LG 0.367		LG 0.063	
00074509				9.99		3.45		0.236		1.053		0.359	
00074514				12.42		4.90		0.127		1.153		0.614	
00074529				7.92		3.99		0.151		0.967		LG 0.258	
00074553				14.14		8.20		0.210		1.413		UG 2.875	
00074568		Q		U 13.81		U 9.72		U 0.193		U 0.615		U 4.802	
00074570				8.69		11.71		D 0.090		D 1.473		B 2.799	
00074594				10.16		9.09		0.219		1.135		2.508	
00074608		Q		8.48		7.22		0.182		1.024		3.458	
00074613				9.60		3.98		0.060		0.815		UG 5.849	
00074636				16.38		4.91		LG 0.030		1.125		1.855	
00074650		A	F	15.43		3.37		0.133		1.211		4.614	

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SW STATION=COLCHESTER LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE UG/M3	POTASSIUM UG/M3	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3
00074481	0.440	<T 0.005	0.087	0.029	LG 0.012	LG 0.015	0.001
00074486	0.617	<T 0.010	0.188	LG 0.027	0.031	LG 0.010	0.001
00074509	0.888	0.048	0.310	0.132	0.107	0.085	0.006
00074514	0.633	0.079	0.176	0.191	0.214	0.177	0.014
00074529	0.614	0.073	0.116	0.178	0.238	<W 0.024	<T 0.006
00074553	0.749	0.096	0.129	B 1.318	D 1.030	D 1.138	D 0.020
00074568	U 0.562	U 0.126	U 0.167	U 1.288	U 1.054	U 1.874	U 0.026
00074570	0.665	0.113	0.136	D 0.611	D 0.479	D 0.778	0.028
00074594	0.554	0.119	0.184	0.309	0.258	0.686	IBL ****
00074608	0.563	<T 0.013	0.096	0.512	0.320	0.730	0.028
00074613	0.560	<T 0.006	0.137	0.398	0.212	0.311	0.022
00074636	0.791	0.080	0.210	0.198	0.113	0.148	0.028
00074650	1.038	0.072	0.252	0.288	0.130	0.288	0.023

SAMPLE NUMBER	MANGANESE UG/M3	COPPER UG/M3	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3
00074481	LG 0.0006	0.001	LG 0.00012	LG 0.0002	LG 0.0071	0.00215	0.8125
00074486	LG 0.0019	0.003	UG 0.00887	B 0.0069	0.0405	D 0.02045	1.5917
00074509	0.0073	0.006	0.00233	0.0013	0.0508	0.01748	1.4695
00074514	0.0120	0.005	0.00367	B 0.0075	0.0412	0.00657	0.7385
00074529	0.0177	0.002	0.00425	<T 0.0021	0.0389	0.00993	1.1032
00074553	UG 0.0311	B 0.007	D 0.00707	UG 0.0072	UG 0.0551	0.00204	1.1080
00074568	U 0.0398	U 0.009	U 0.00621	U 0.0048	U 0.0258	U 0.00141	U 1.3703
00074570	0.0216	0.003	0.00407	0.0044	B 0.0778	0.00263	B 0.1233
00074594	0.0181	0.005	<T 0.00090	0.0018	0.0877	0.00077	1.0831
00074608	0.0205	0.004	<T 0.00205	0.0018	0.0653	UG 0.00909	0.6147
00074613	0.0162	0.003	<T 0.00174	0.0011	0.0672	0.00124	0.6223
00074636	0.0136	0.004	<T 0.00173	0.0014	0.0544	0.00087	0.5565
00074650	0.0147	0.003	<T 0.00202	<T 0.0014	0.0577	<T 0.00087	1.4706

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SW STATION=PALMERSTON LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00074485	AP02482	AS	02	01	JAN 26, 1988	DEC 29, 1987	0915	1300	1	82256	
00074490	AP02484	AS	02	01	FEB 24, 1988	JAN 26, 1988	1215	0915	1	87842	
00074513	AP02537	AS	02	01	MAR 22, 1988	FEB 24, 1988	1300	1215	1	63409	
00074518	AP02578	AS	02	01	APR 19, 1988	MAR 22, 1988	1300	1300	1	50327	
00074530	AP02612	AS	02	01	MAY 17, 1988	APR 19, 1988	1230	1300	1	74416	
00074555	AP02635	AS	02	01	JUN 14, 1988	MAY 17, 1988	1300	1230	1	57694	
00074566	AP02672	AS	02	01	JUL 12, 1988	JUN 14, 1988	1300	1300	1	.	
00074573	AP02724	AS	02	01	AUG 9, 1988	JUL 12, 1988	1300	1300	1	93622	
00074598	AP02798	AS	02	01	SEP 6, 1988	AUG 9, 1988	1300	1300	1	85563	
00074612	AP02896	AS	02	01	OCT 4, 1988	SEP 6, 1988	1130	1300	1	77216	
00074617	AP02896	AS	02	01	NOV 1, 1988	OCT 4, 1988	1300	1300	1	80878	
00074640	AP02952	AS	02	01	NOV 29, 1988	NOV 1, 1988	1330	1300	1	77645	
00074654	AP02980	AS	02	01	DEC 29, 1988	NOV 29, 1988	0945	1330	1	76048	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3		SULFATE UG/M3		NITRIC UG/M3		NITRATE UG/M3		CALCIUM UG/M3	
00074485				9.22		3.45		0.182		0.796		0.674	
00074490				12.32		3.36		0.140		0.928		0.233	
00074513				8.02		3.01		0.244		0.607		0.237	
00074518		AB		4.13		3.74		0.254		0.904		0.278	
00074530				2.78		3.59		0.077		0.739		0.400	
00074555		B		LG 0.36	<T	0.11	<W	0.003		0.156		0.364	
00074566		AQF		****		****		****		****		****	
00074573				4.34		8.06		0.166		0.662		0.299	
00074598				3.27		4.93		0.108		0.678		0.815	
00074612		A		3.33		4.61		0.114		0.719		0.622	
00074617				4.44		2.47		0.074		0.606		0.334	
00074640				18.52		3.35		0.103		0.889		0.258	
00074654		Q	Z	8.09		2.67		0.089		0.809		0.421	

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=SW STATION=PALMERSTON LOVOL SITE NO.1

SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00074485	0.650	0.053	0.275	UG 0.236	UG 0.224	0.182	0.007
00074490	0.524	0.047	0.233	0.112	0.109	0.068	0.004
00074513	0.481	0.029	0.188	0.065	0.053	0.076	0.004
00074518	0.467	0.045	0.147	<T 0.044	0.083	<T 0.045	<W 0.002
00074530	0.323	0.041	0.097	<T 0.067	0.212	<T 0.055	<T 0.006
00074555	0.199	<W 0.003	0.071	<T 0.075	<W 0.009	0.208	<W 0.002
00074566	****	****	****	****	****	****	****
00074573	0.369	0.089	0.092	0.171	0.094	0.128	D 0.022
00074598	0.292	0.064	0.131	0.129	0.140	0.223	|BL ****
00074612	0.324	<T 0.013	0.155	0.168	0.118	0.194	0.017
00074617	0.272	<T 0.006	0.087	0.136	0.073	0.073	0.011
00074640	0.489	0.052	0.142	0.102	0.049	0.061	0.015
00074654	0.434	0.046	0.155	0.105	0.075	0.114	0.010

SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMIUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00074485	0.0085	0.002	0.00073	0.0013	0.0164	0.00213	D 0.9519
00074490	0.0057	0.003	0.00524	0.0013	0.0353	0.01116	0.8766
00074513	0.0039	B 0.013	0.00268	0.0006	0.0197	0.00725	1.8609
00074518	<T 0.0070	0.003	<T 0.00199	<T 0.0014	0.0328	0.00942	1.7784
00074530	0.0134	0.003	0.00376	<T 0.0012	0.0249	0.01094	0.9810
00074555	<T 0.0023	<T 0.001	0.00243	<T 0.0010	<T 0.0031	0.00728	0.4073
00074566	****	****	****	****	****	****	****
00074573	0.0101	0.004	0.00320	<T 0.0014	0.0192	0.02136	1.0681
00074598	0.0072	0.002	<T 0.00035	0.0007	0.0152	<T 0.00023	0.7012
00074612	0.0076	0.002	<T 0.00130	0.0008	0.0181	<T 0.00065	0.6993
00074617	0.0053	<T 0.001	<T 0.00124	0.0007	0.0148	<T 0.00049	0.5564
00074640	0.0062	0.002	<T 0.00077	0.0009	0.0193	<T 0.00039	0.8887
00074654	0.0055	0.002	<T 0.00145	0.0013	0.0197	<T 0.00066	0.7101

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SW STATION=PORT STANLEY LOVOL SITE NO.1 ----------

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00074482	AP02482	AS	02	01	JAN 26, 1988	DEC 29, 1987	1100	0930	1	63147	
00074487	AP02484	AS	02	01	FEB 23, 1988	JAN 26, 1988	0940	1100	1	79107	
00074510	AP02537	AS	02	01	MAR 22, 1988	FEB 23, 1988	0900	0940	1	80171	
00074515	AP02578	AS	02	01	APR 19, 1988	MAR 22, 1988	1530	0900	1	80380	
00074528	AP02612	AS	02	01	MAY 17, 1988	APR 19, 1988	0900	1530	1	78953	
00074546	AP02635	AS	02	01	JUN 14, 1988	MAY 17, 1988	1030	0900	1	77212	
00074563	AP02672	AS	02	01	JUL 12, 1988	JUN 14, 1988	0930	1030	1	64330	
00074571	AP02724	AS	02	01	AUG 9, 1988	JUL 12, 1988	0900	0930	1	66460	
00074595	AP02798	AS	02	01	SEP 6, 1988	AUG 9, 1988	1330	0900	1	75020	
00074609	AP02896	AS	02	01	OCT 4, 1988	SEP 6, 1988	1000	1330	1	40680	
00074614	AP02896	AS	02	01	NOV 1, 1988	OCT 4, 1988	0945	1000	1	59670	
00074639	AP02952	AS	02	01	NOV 29, 1988	NOV 1, 1988	0930	0945	1	52810	
00074651	AP02980	AS	02	01	DEC 28, 1988	NOV 29, 1988	0930	0930	1	74910	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3		SULFATE UG/M3		NITRIC UG/M3		NITRATE UG/M3		CALCIUM UG/M3	
00074482		C		9.82		2.79		0.103		0.768		0.772	
00074487				0.56	LG	0.20	LG	0.073	D	0.139	D	0.025	LG
00074510				9.75		3.64		0.187		0.967		0.407	
00074515				9.82		3.73		0.228		0.946		0.280	
00074528				4.62		4.42		0.117		0.925		0.259	LG
00074546				5.82		6.99		0.220		1.217		0.648	
00074563				7.05		5.15		0.249		0.995		0.777	
00074571		A		5.65		8.92		0.230		0.602		0.030	<W
00074595		A		6.66		7.33		0.227		0.693		0.853	
00074609		Q		7.29		5.26		0.256		0.811		0.615	
00074614		AB		6.06		2.15		0.097		0.503		0.335	
00074639		B		12.94		1.44		0.155		0.492		0.148	
00074651		B		13.74		2.60		0.144		0.834		0.561	

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SW STATION=PORT STANLEY LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00074482	0.847	0.056	0.328	0.121	0.122	0.108	0.006
00074487	B 0.107	<T 0.004	0.067	LG 0.009	LG 0.003	LG 0.006	0.001
00074510	0.699	0.046	0.287	0.123	0.104	0.070	0.005
00074515	0.485	0.050	0.121	0.121	0.107	<T 0.028	<T 0.004
00074528	0.443	0.143	0.121	0.148	0.244	<W 0.025	<W 0.001
00074546	0.453	0.093	0.102	0.337	0.324	0.389	<T 0.004
00074563	0.451	0.093	0.152	0.466	0.466	0.591	0.016
00074571	0.406	0.105	0.129	0.196	<T 0.015	<W 0.030	0.030
00074595	0.320	0.097	0.150	0.227	0.253	0.150	IBL ****
00074609	0.418	<T 0.012	0.111	UG 2.360	0.189	0.125	0.020
00074614	0.302	<T 0.025	0.176	0.137	0.079	0.060	0.010
00074639	0.322	0.028	0.104	<T 0.055	0.032	<T 0.027	0.006
00074651	0.534	0.053	0.207	0.174	0.095	0.117	0.013

SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMIUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00074482	0.0055	0.003	0.00143	0.0019	* 0.0285	0.00228	0.8124
00074487	LG 0.0010	0.001	UG 0.00645	0.0009	LG 0.0006	0.00814	0.5790
00074510	0.0081	0.005	0.00374	0.0017	0.0337	0.00795	0.9081
00074515	0.0106	0.002	0.00137	<T 0.0016	0.0280	0.00867	1.6049
00074528	0.0171	0.004	0.00545	<T 0.0018	0.0342	0.01251	0.9411
00074546	0.0194	0.003	0.00168	<T 0.0019	0.0350	0.00596	1.3469
00074563	0.0233	0.005	0.00202	<T 0.0017	0.0342	0.00061	1.8809
00074571	0.0135	0.003	0.00481	<T 0.0017	0.0346	0.00146	1.6551
00074595	0.0200	0.002	<T 0.00080	0.0012	0.0320	<T 0.00040	1.0531
00074609	0.0369	0.005	<T 0.00320	<T 0.0010	0.0295	<T 0.00074	1.1308
00074614	0.0057	<T 0.001	<T 0.00168	<T 0.0007	0.0136	<T 0.00017	0.8212
00074639	0.0034	0.003	<T 0.00114	<T 0.0004	0.0121	<T 0.00019	0.7764
00074651	0.0083	0.002	<T 0.00147	0.0024	0.0307	<T 0.00053	0.6675

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=SW STATION=SHALLOW LAKE LOVOL SITE NO.1

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00084181	AP02443	AS	02	01	JAN 26, 1988	DEC 29, 1987	0905	1100	1	81040	
00084078	AP02482	AS	02	01	FEB 23, 1988	JAN 26, 1988	0950	0950	1	80130	
00084242	AP02508	AS	02	01	MAR 22, 1988	FEB 23, 1988	1100	0950	1	78500	
00084305	AP02550	AS	02	01	APR 19, 1988	MAR 22, 1988	1130	1100	1	77030	
00084410	AP02612	AS	02	01	MAY 17, 1988	APR 19, 1988	0950	1130	1	80010	
00084473	AP02628	AS	02	01	JUN 14, 1988	MAY 17, 1988	1200	0950	1	78710	
00084504	AP02696	AS	02	01	JUL 12, 1988	JUN 14, 1988	1335	1200	1	78950	
00084553	AP02705	AS	02	01	AUG 9, 1988	JUL 12, 1988	1220	1335	1	75310	
00084648	AP02760	AS	02	01	SEP 6, 1988	AUG 9, 1988	1210	1220	1	89230	
00084822	AP02818	AS	02	01	OCT 4, 1988	SEP 6, 1988	1250	1215	1	79760	
00084901	AP02870	AS	02	01	NOV 1, 1988	OCT 4, 1988	1400	1255	1	52620	
00042007	AP02915	AS	02	01	NOV 29, 1988	NOV 1, 1988	1630	1400	1	84617	
00042506	AP02950	AS	02	01	DEC 27, 1988	NOV 29, 1988	1405	1635	1	76529	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3		SULFATE UG/M3		NITRIC UG/M3		NITRATE UG/M3		CALCIUM UG/M3	
00084181				10.77		2.80		0.111		0.784		0.531	
00084078				7.70	B	1.52		0.125		0.443		0.167	
00084242				<T 0.07		<W 0.03	D	0.003	D	0.013	LG	0.025	
00084305				D 15.33		3.95		0.143		0.759		0.312	
00084410				LG 1.25		LG 0.84		0.050		0.169		<W 0.025	
00084473				2.02		2.21		0.054		0.248		<T 0.065	
00084504				4.36		5.26	LG	0.028		0.437		0.431	
00084553				3.24		4.78		0.163		0.239		<W 0.027	
00084648				3.25		3.16		0.092		0.241		0.361	
00084822				3.73		3.90		0.118		0.483		0.383	
00084901				4.35		1.96		0.103		0.447		0.364	
00042007				3.80		1.70		0.064		0.473		0.118	
00042506				5.15		1.50		0.089		0.523		0.235	

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SW STATION=SHALLOW LAKE LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00084181	D 0.395	0.064	0.189	0.069	0.053	0.148	0.004
00084078	B 0.225	LG 0.014	0.129	0.037	0.026	LG 0.006	D 0.023
00084242	B 0.070	0.052	LG 0.056	B 0.008	B 0.003	LG 0.006	LG 0.001
00084305	0.389	0.052	0.227	0.079	0.066	<T 0.075	0.009
00084410	0.162	LG 0.014	0.044	<W 0.012	<T 0.030	<W 0.025	<T 0.002
00084473	ICR ****	LG 0.032	0.077	<T 0.013	0.069	<W 0.025	<W 0.001
00084504	0.291	0.072	0.293	0.342	D 0.367	<T 0.066	0.007
00084553	0.246	0.127	D 0.216	0.112	0.062	<W 0.027	<T 0.004
00084648	0.179	0.045	0.106	0.109	0.045	0.167	0.008
00084822	0.207	0.050	0.165	0.107	0.247	<T 0.062	<T 0.003
00084901	0.285	0.038	0.138	<T 0.061	0.061	0.070	IBL ****
00042007	0.189	<T 0.012	0.089	<T 0.033	0.028	<T 0.032	0.008
00042506	0.314	0.033	0.147	0.086	0.054	0.056	0.008

SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMIUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00084181	0.0049	0.003	0.00074	0.0011	0.0228	0.00012	0.6824
00084078	B 0.0012	0.002	0.00037	0.0009	LG 0.0087	0.00210	0.8960
00084242	LG 0.0006	0.002	0.00178	0.0004	LG 0.0006	0.00208	<W 0.0127
00084305	<T 0.0058	0.004	0.00182	<T 0.0013	0.0175	0.00770	1.3371
00084410	<T 0.0025	<T 0.001	0.00250	<W 0.0006	<T 0.0029	0.00507	0.6437
00084473	0.0076	0.002	0.00470	<W 0.0006	0.0089	0.00266	0.6645
00084504	0.0190	0.004	0.00950	<T 0.0016	0.0139	0.00925	0.7093
00084553	0.0093	0.003	0.00558	<T 0.0016	0.0146	0.00983	1.1088
00084648	<T 0.0050	0.002	0.00303	<T 0.0010	0.0146	0.00148	0.6220
00084822	<T 0.0063	0.003	0.00339	<W 0.0006	0.0182	0.00079	0.7372
00084901	0.0042	<T 0.001	<W 0.00038	<T 0.0006	0.0093	<T 0.00019	0.8552
00042007	0.0030	0.002	<T 0.00047	<T 0.0006	0.0095	<T 0.00035	0.5554
00042506	0.0041	0.002	<T 0.00248	<T 0.0005	0.0115	<T 0.00026	0.7056

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=SW STATION=WILKESPORT LOVOL SITE NO.1

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE *	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER 1
00074483	AP02482	AS	02	01	JAN 26, 1988	DEC 29, 1987	1600	1400	1	88180	
00074488	AP02484	AS	02	01	FEB 23, 1988	JAN 26, 1988	1730	1600	1	93030	
00074511	AP02537	AS	02	01	MAR 22, 1988	FEB 23, 1988	1530	1730	1	77520	
00074516	AP02578	AS	02	01	APR 19, 1988	MAR 22, 1988	1545	1600	1	65810	1
00074531	AP02612	AS	02	01	MAY 17, 1988	APR 19, 1988	1530	1545	1	67190	
00074550	AP02635	AS	02	01	JUN 14, 1988	MAY 17, 1988	1500	1530	1	62100	
00074564	AP02672	AS	02	01	JUL 12, 1988	JUN 14, 1988	1400	1500	1	45840	
00074572	AP02724	AS	02	01	AUG 9, 1988	JUL 12, 1988	1600	1400	1	61100	
00074596	AP02798	AS	02	01	SEP 6, 1988	AUG 9, 1988	1500	1600	1	43900	
00074610	AP02896	AS	02	01	OCT 4, 1988	SEP 6, 1988	1400	1500	1	67460	
00074615	AP02896	AS	02	01	NOV 1, 1988	OCT 4, 1988	1500	1400	1	86500	
00074637	AP02952	AS	02	01	NOV 29, 1988	NOV 1, 1988	1400	1500	1	81380	
00074652	AP02980	AS	02	01	DEC 28, 1988	NOV 29, 1988	1100	1400	1	85090	

SAMPLE NUMBER	PASSIVE NUMBER 2	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX UG/M3		SULFATE UG/M3		NITRIC UG/M3		NITRATE UG/M3		CALCIUM UG/M3	
00074483				11.06		2.02		0.225		0.544		0.508	
00074488				20.94		1.73		0.183		0.661		0.134	
00074511				8.91	LG	0.87		0.126	LG	0.252	LG	0.026	
00074516				12.24		4.63		0.122		1.086		0.608	
00074531				7.72		4.57		0.089		0.886	D	1.048	
00074550				10.27		5.73		0.153		1.151		1.433	
00074564		CA		8.96	LG	0.76		0.087		0.524	<W	0.044	
00074572				10.76		9.00		0.172		0.606	<W	0.033	
00074596		C		7.81	LG	0.59		0.077		0.353		0.502	
00074610		Q		6.72	LG	0.59		0.042	LG	0.222	<T	0.068	
00074615				UG 13.76		3.34		0.067		0.630		0.543	
00074637				15.27		4.14		0.108		0.934		0.319	
00074652				13.35		3.02		0.078		0.799		0.717	

ONTARIO MINISTRY OF THE ENVIRONMENT
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CUMULATIVE SAMPLING ANALYSIS RESULTS

---------- REGION=SW STATION=WILKESPORT LOVOL SITE NO.1 ----------

SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00074483	0.612	0.042	0.220	0.153	0.144	0.070	0.003
00074488	0.666	0.029	0.209	0.067	0.069	0.031	0.002
00074511	0.355	0.023	0.070	LG 0.022	LG 0.006	LG 0.006	0.001
00074516	0.585	0.063	0.169	0.164	0.186	<T 0.065	<T 0.006
00074531	0.610	0.053	0.150	0.149	0.320	<T 0.048	<T 0.003
00074550	0.741	0.082	0.175	0.354	0.322	0.531	<T 0.006
00074564	0.436	<W 0.005	0.136	<T 0.035	<W 0.011	0.458	<W 0.002
00074572	0.646	0.105	0.155	0.213	<T 0.031	<W 0.033	0.046
00074596	0.433	0.023	0.165	<T 0.013	LG 0.022	0.025	BL ****
00074610	0.282	<W 0.007	0.163	<T 0.042	LG 0.013	<T 0.012	LG 0.001
00074615	0.532	0.052	0.185	0.197	0.116	0.099	0.014
00074637	0.455	0.061	0.114	0.120	0.076	0.058	0.018
00074652	0.646	0.065	0.194	0.153	0.090	0.114	0.014

SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMIUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00074483	0.0074	0.002	B 0.09583	LG 0.0001	0.0153	0.00192	0.6158
00074488	0.0038	0.002	0.00548	0.0012	0.0215	0.00986	1.3329
00074511	LG 0.0013	0.004	0.00439	LG 0.0005	LG 0.0006	0.00375	1.3029
00074516	0.0099	0.004	0.00198	<T 0.0020	0.0319	0.01269	1.0074
00074531	0.0156	0.003	0.00506	D 0.0048	0.0335	0.01150	1.1088
00074550	0.0137	0.004	0.00258	<T 0.0040	0.0354	0.00644	1.1723
00074564	<W 0.0022	<T 0.001	0.00262	<W 0.0011	<T 0.0083	0.00028	1.0100
00074572	0.0115	0.003	0.00524	0.0057	0.0393	0.00123	1.9313
00074596	<T 0.0011	0.003	<T 0.00068	<W 0.0002	0.0077	<W 0.00011	0.8428
00074610	LG 0.0010	<W 0.000	<W 0.00030	<W 0.0001	0.0044	<T 0.00015	0.5781
00074615	0.0072	0.002	<T 0.00139	0.0018	0.0254	<T 0.00058	0.7514
00074637	0.0079	0.003	<T 0.00098	0.0010	0.0319	<T 0.00049	0.7496
00074652	0.0086	0.003	<T 0.00129	0.0018	0.0447	0.00082	0.6581

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